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A Catalogue of the Family Truncatellidae with Notes and Descriptions of New Species

By WILLIAM J. CLENCH AND RUTH D. TURNER

In this report we consider the genera *Truncatella, Geomelania, Blandiella* and *Taheitia* as members constituting the family Truncatellidae.

The genus *Cecina* A. Adams, generally considered a member of the family Truncatellidae, belongs, in our opinion, to the family Amnicolidae. We have a cotype of *Cecina manchurica* A. Adams (MCZ 178837) and this specimen has all of the characteristics of a member of the latter family. It is dark green in color, devoid of sculpture and is truncated as the result of corrosion rather than mechanical stress.

The radulae of the genera in the Truncatellidae have a central tooth which is triangular, thus differing, so far as we can determine, from other closely allied groups which usually have the central or rachidian tooth subquadrate in outline. Also the adult shell is generally mechanically truncated. This, at first, may seem a superficial character, but nevertheless it has resulted in a definite pattern of profound structural changes in the shell. The loss of the early whorls necessitates the formation of a septum, a rounded and concave plug, in the region of the mid-whorls. Fracture of the early whorls takes place along the outer margin of this septum where it joins the side of the shell. The point of fracture is remarkably constant for any one species, though the number of whorls remaining may vary from four to six or seven, depending upon the species.

This is not in any way to be confused with the corrosive

effect of certain environments which causes the loss of a few of the very early whorls in many freshwater gastropods. This, of course, stimulates the individual to wall off this area with a lime deposit to prevent any subsequent exposure of the soft parts. In the case of members of the Truncatellidae there is a definite reaction when the animal approaches maturity and at this time the plug is formed and the subsequent fracture takes place. It is probably equivalent to the reaction which causes a gastropod to produce a lip on the adult shell, a reaction remarkably different from the one that is responsible for the forward-growing shell structure.

The genus *Truncatella* is widely distributed in the tropical and south temperate coastal regions. In a few areas, notably coastal Europe, it survives beyond these limits. The genus, however, is not present everywhere within its range even when ecological conditions appear favorable. It is sporadic in occurrence and usually exists in isolated colonies. This is probably due to the rather hazardous niche in the environment that they attempt to occupy, namely, the region just below high water line. Becoming established by means of flotsam, a colony flourishes for a time, builds up a population and then succumbs or is scattered by a storm. There appear to be other limitations to its distribution, principally the ability to survive a long journey at sea. So far as we can trace it, the genus has never reached the Hawaiian Islands, nor any other island group in the central Pacific to the east of the Society Islands.

In the Eastern Pacific, *Truncatella* has been recorded only between southern California and Panama. In the Western Atlantic, it occurs from northern Florida south to Trinidad. Though an occasional colony has been found north of Florida, such an occurrence appears to be sporadic.

We are deeply indebted to R. Humes, D. Thaanum, J. R. leB. Tomlin and T. van der Feen for the gift of much valuable material in this family. To C. G. Aguayo, J. Armstrong, C. M. Cooke, C. Guthe and H. A. Rehder we are grateful for the use of the collections under their charge. These collections combined with our own represent well over 2000 lots, approximately 75,000 specimens. This has made possible a far better understanding of the family and its complexities than if we

had depended only upon our own material and such data as we could glean from the published record.

Much is still unknown about this family, particularly regarding the genus *Truncatella.* Field studies are very important and attention is directed toward the variation and extent of costation within single colonies. Nothing, so far as we have been able to determine from the literature, is known about their life histories, such as length of life, breeding habits, mode of dispersal and many other factors that are important to an understanding of geographical distribution.

Synopsis of the genera and subgenera in the Truncatellidae

Genus **Truncatella** *Risso*

Subgenus **Truncatella** *Risso*

Subgenus **Tomlinitella** *Clench and Turner*

Genus **Geomelania** *Pfeiffer*

Subgenus **Geomelania** *Pfeiffer*

Subgenus **Chittia** *H. and A. Adams*

Subgenus **Scalatella** *von Martens*

Subgenus **Merrilliana** *Clench and Turner*

Genus **Blandiella** *Guppy*

Genus **Taheitia** *H. and A. Adams*

We outline below all the known species in *Geomelania* and *Taheitia.* In *Truncatella,* only the synonymies of a few of the Indo-Pacific species are given. We have considered elsewhere the species occurring in the Western Atlantic (*Johnsonia* **2,** pp. 149–164, 1948). In the catalogue at the end of this report, however, are listed all of the published names that we have been able to trace in the Truncatellidae.

Plate 22. Radulae of the Truncatellidae

Fig. 1. *Blandiella reclusa* Guppy

Fig. 2. *Truncatella pulchella* Pfeiffer

Fig. 3. *Taheitia arcasiana abbotti* Clench and Turner

Fig. 4. *Geomelania* (*Geomelania*) *minor* C. B. Adams

Fig. 5. *Geomelania* (*Merrilliana*) *elegans* C. B. Adams

The radulae of the various generic and subgeneric elements in this family so far examined are essentially quite similar. The greatest differences appear to be in the shape of the rachidian teeth and the number of denticles these teeth support on the mid portion.

Comparisons between the few species that we have examined in the genus *Truncatella* show no specific differences in the structure of the radula (*T. pulchella, T. bilabiata* and *T. guerinii*).

The only radular figures of *Taheitia* that we have seen are those of I. Rensch (1937, pp. 627–630). The rachidian teeth are incompletely drawn and we believe rather inaccurately as to detail.

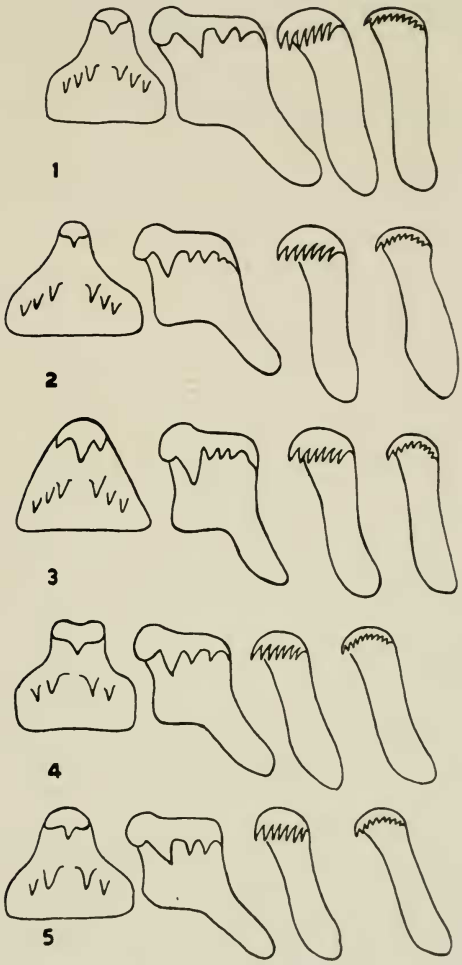

Plate 22
Drawn by Ruth D. Turner

Genus **Truncatella** *Risso*

Acmea of authors, not of Hartmann in Strum's Deutschlands Fauna; Iredale 1915, Proc. Malacological Soc., London **11**, p. 332; Pilsbry 1926, Nautilus **40**, p. 32; Keene 1946, Minutes of the Conchological Club of Southern California no. 56, p. 7.

Acmea Hartmann 1821, Neue Alpina **1**, p. 204–212. This use of *Acmea* was for a *Truncatella* but was published after his use of *Acmea* and *Acme* in Strum's Deutschlands Fauna for a species which is not in the genus *Truncatella.*

For a full discussion, see Clench and Turner 1948, *Johnsonia* **2**, p. 151.

Truncatella Risso 1826, Histoire Naturelle de l'Europe Méridionale **4**, p. 124; Gude 1921, Fauna of British India, Mollusca **3**, p. 360.

Fidelis Risso 1826, Histoire Naturelle de l'Europe Méridionale **4**, p. 121 (genotype, *Fidelis theresa* Risso, monotypic).

Truncatella Lowe 1832, Zoological Journal **5**, p. 300 (genotype, *Cyclostoma truncatulum* Draparnaud, monotypic).

Erpetometra Lowe 1832, Zoological Journal **5**, p. 300 (genotype, *Cyclostoma truncatulum* Draparnaud, monotypic).

Choristoma J. de Cristophori and Jan 1832, Cat. Mus. (Mantissa Test.) p. 3, *non* Hartmann 1840. [We have not seen this publication.]

Truncatula Leach 1847, Annals and Magazine of Natural History (1) **20**, p. 271 (genotype, *Truncatula truncata* Montagu = *truncatus* Montagu = *Helix subcylindrica* Linné, subsequent designation, Clench and Turner 1948, *Johnsonia* **2**, p. 152).

Zeanoë Leach 1852, Synopsis of the Mollusca of Great Britain, London, p. 198 (genotype, *Turbo nitida* Adams, monotypic).

Glaucothoë Leach 1852, Synopsis of the Mollusca of Great Britain, London, p. 199 (genotype, *Glaucothoe montaguana* Leach, monotypic).

Herpetometra 'Lowe' Gray 1856, Proc. Zool. Soc., London, p. 22 [error for *Erpetometra* Lowe].

Albertisia Issel 1880, Ann. del Museo Civico di Storia Nat. di Genova **15**, p. 275 (genotype, *Albertisia punica* Issel, monotypic).

Truncatula 'Risso' Caziot, 1910, Ètude Moll. Princip. Monaco, p. 450 (error for *Truncatella* Risso); *non* Leach 1847, *non* Hagenow 1851.

Genotype. *Truncatella laevigata* Risso, subsequent designation, Gude 1921 (=*Helix subcylindrica* Linné).

Shells small, rarely exceeding 10 mm. in length in the adult truncated form. The shell has many whorls but most of these are lost when the animal becomes adult. Sculpture, when present, consists of rather strong axial costae which may extend from suture to suture or disappear on the whorl periphery. In a few species or members of a single species this sculpture may be entirely absent. Operculum paucispiral with or without a thin accessory plate of calcium on its outer surface.

Members of the genus *Truncatella* are prosobranchiate mollusks with the sexes separate, are aquatic or semiaquatic and live in the vicinity of high water line. They rarely occur where there is much brackish water. In relationship they are close to the Bulimidae and Rissoidae.

Subgenus **Truncatella** *Risso*

Truncatella Risso 1826, Histoire Naturelle de l'Europe Méridionale **4**, p. 124.

Subgenotype, *Truncatella laevigata* Risso, subsequent designation, Gude 1921 (=*Helix subcylindrica* Linné).

This subgenus is characterized by having shells which may be smooth or which may exhibit more or less numerous costae. However, costae are seldom completely absent. Operculum corneous, with or without a thin calcified plate on its outer surface.

Truncatella (Truncatella) marginata *Küster*

Truncatella marginata Küster 1855, Conchy.-Cab. (2) **1**, pt. 23, p. 12, pl. 2, fig. 24–26 (Labuan, Borneo).

Truncatella ceylanica Pfeiffer 1856 [1857] Proc. Zool. Soc. London, p. 336 (Ceylon).

Truncatella pfeifferi v. Martens 1861, Malak. Blätt. **7**, p. 43 (Japan).

Truncatella semicostata Montrouzier 1862, Jour. de Conchyliologie **10**, p. 243, pl. 9, fig. 10 (Island of Art and New Caledonia).

Truncatella cerea Gassies 1878, Jour. de Conchyliologie **26**, p. 339 (Ilot Koutoumo, Ile de Pins, New Caledonia).

Truncatella nitida 'Gassies' Garrett 1887, Proc. Zool. Soc. London, p. 300 [nude name].

Truncatella japonica Pilsbry and Hirase 1905, Proc. Acad. Nat. Sci. Philadelphia **57**, p. 707 (Futami Island [Japan]).

This is a dimorphic species, the extremes being strongly costate and completely smooth, As a consequence a host of names have been employed, not only designating these forms but also as a result of the wide geographic range of this species. Differences certainly exist between the two extremes, but there are often connecting forms in a series from one locality. For convenience, the name *teres* Pfeiffer can be retained for the strongly costate forms, *marginata* Küster for those that are nearly smooth and *pellucida* Dohrn for those that are small

and entirely smooth. Geographically there is a slight size difference, but from one locality, the specimens are all approximately the same size. Different localities may show a size difference of nearly 2 mm.

Truncatella marginata form **teres** *Pfeiffer*

Truncatella teres Pfeiffer 1856 [1857], Proc. Zool. Soc. London, p. 336 (Isle of Mauritius and Trinity Bay, Australia).

Truncatella labiosa Souverbie 1862, Journ. de Conchyliologie **10,** p. 242, pl. 9, fig. 9, (Island of Art [New Caledonia]).

Truncatella scalarina Cox 1867, Proc. Zool. Soc. London, p. 40 (Port Lincoln [South] Australia); 1868, Monograph of Australian Land Shells, p. 93, pl. 15, fig. 10a–b.

Truncatella marginata form **pellucida** *Dohrn*

Truncatella pellucida Dohrn 1860, Malak. Blätt. **6,** p. 203 (Arabia).

Truncatella semicostulata Jickeli 1874, Nova Acta der Ksl. Leop. Carol. Deutschen Akad. der Naturforschen **37,** p. 189, pl. 7, fig. 8 (Dahlak [Daalac, Eritrea]).

Truncatella quadrasi v. Möllendorff 1893, Bericht der Senckenbergischen Naturforschenden Gesellschaft in Frankfort, p. 137, pl. 5, fig. 10a–b (Magallanes, Sibuyan, Philippine Islands).

Truncatella (Truncatella) rustica *Mousson*
Plate 25, fig. 2

Truncatella rustica Mousson 1865, Journ. de Conchyliologie **13,** p. 186, pl. 14, fig. 8 (Nucuiona, Uvea [Wallis Island]).

Truncatella futunaensis Mousson 1869, [in] Museum Godeffroy, Hamburg, Catalog 4, p. 76 [nude name]; Mousson 1871, Journ. de Conchyliologie **19,** p. 30 (Futuna Island [Horne Islands]).

Truncatella costellifera Pease 1871, Proc. Zoological Soc., London, p. 468 (Vavau Id. [Tonga Islands]).

This species is generally very strongly costate and bilabiate. It would appear to be quite rare even though widely distributed. See also remarks under *T. granum* Garrett.

We have seen specimens from the following localities: Uvea (Wallis Island); New Caledonia; Zanzibar; Mombassa, Kenya, East Africa.

So far as we can determine, *T. futunaensis* Mousson is only a rather large *T. rustica.*

Truncatella (Truncatella) kiusiuensis *Pilsbry*
Plate 25, fig. 5

Truncatella kiusiuensis Pilsbry 1902, Proc. Acad. Nat. Sciences Philadelphia **53,** p. 615 (Tane-ga-shima, Hirado Hizen, Japan).

This species is very close to *T. rustica* Mousson, differing mainly in that the parietal margin of the lip is in close attachment to the body whorl with no indication of a gap.

We possess specimens from Tane-ga-shima, Awaji and Tsushima-Iki, Japan.

Truncatella (Truncatella) granum *Garrett*
Plate 25, fig. 4

Truncatella granum Garrett 1872, American Journal Conchology **7,** p. 225 (N. E. end of Taviuni Id., Fiji Islands).

This is a very small species, about 4½ mm. long, possessing a duplex lip, a rather strong basal ridge and having a very thin calcareous plate on the operculum. There are about 28 rather narrow and low axial costae on the body whorl.

This species differs quite noticeably from *T. rustica* Mousson by its much smaller size, finer and more delicately formed costae and, especially, in the type of the duplex or bilabiate lip. In *rustica* the lip is a simple duplex formation. In *granum*, however, it actually consists of a strongly developed outer lip, and an inner lip consisting of a series of "nested" aperture margins. This actually causes the aperture to become smaller during late adult life.

Truncatella (Truncatella) thaanumi, new species
Plate 25, fig. 6

Description. Shell about 5½ mm. in length. Whorls 4½ and moderately convex. Color a pale straw-yellow. Aperture small but surrounded by an exceedingly thickened duplex lip with a broad parietal gap. Basal ridge remarkably developed, so much so that it appears below the aperture and merges into the duplex lip. Sculpture consisting of about 20 strong axial blade-like costae which pass over the basal ridge. Operculum with a rather thin calcareous plate.

length	width	
5.5	2.4 mm.	Holotype
6.2	2.8	Yap Island, Caroline Islands
5	2.2	Na Islet, Ponape, Caroline Islands

Types. Holotype, Museum of Comparative Zoölogy no. 159379 from Ulali Island, Truk Group, Caroline Islands, ex. D. Thaanum. Paratypes, B. P. Bishop Museum no. 157080 and Museum of Comparative Zoölogy no. 157478, from Na Islet, Ponape Id., Caroline Islands.

Remarks. This species appears nearest in its relationships to *T. granum* Garrett. It differs, however, by being larger, having fewer and more blade-like axial ribs and possessing a remarkably developed basal ridge.

Range. Known only from the Caroline Islands.

Records. CAROLINE ISLANDS: Ulali Island, Truk Group (MCZ); Yap Island (B. P. Bishop Museum and MCZ); Na Islet, Ponape Island (B. P. Bishop Museum and MCZ); Lele, Kusaie Island (B. P. Bishop Museum).

Truncatella thaanumi insularis, new subspecies

Description. Shell similar in general outline to *thaanumi* with 20–23 blade-like costae on the body whorl. This subspecies differs, however, in being a little larger and in lacking the remarkably developed basal ridge. Both this subspecies and *thaanumi* have a rather broad parietal gap, much greater than that existing in *T. granum.* Operculum may or may not have a thin calcified plate on a chitinous base.

length	width	
6.4	2.3 mm.	Holotype
7.2	2.5	Paratype

Types. Holotype, B. P. Bishop Museum no. 87796 from near Houma, Tongatabu, Tonga Islands, H. S. Ladd, collector. Paratypes in the Museum of Comparative Zoölogy.

Remarks. This subspecies differs quite sharply from the typical form by the reduction of the basal ridge. Both have

the sleeve-like type of aperture as discussed under *T. granum* Garrett. This subspecies is known only from the type locality.

Truncatella (Truncatella) avenacea *Garrett*
Plate 25, fig. 3

Truncatella avenacea Garrett 1887, Proc. Zool. Soc. London, p. 301 (Vanua Levu [Fiji Islands]).

The B. P. Bishop Museum possesses specimens of this rare species from Vanua Mbalavu collected by Y. Kondo. This locality is in the Lau group of islands which lie to the east of Vanua Levu.

Truncatella (Truncatella) guerinii *A. and J. B. Villa*
Plate 23, fig. 12–13

Truncatella guerinii A. and J. B. Villa 1841, Conchyliarum Terrestrium et Fluviatilium, Mediolani [Milan], p. 59 (Bourbon [Réunion Id., Indian Ocean]).

Truncatella valida Pfeiffer 1846, Zeitschrift für Malakozoologie **3,** p. 182 (Philippine Islands).

Truncatella aurantia Gould 1847 [1848] Proc. Boston Soc. Nat. Hist. **2,** p. 208 (Mangsi Id., Borneo); Gould 1852, United States Exploring Expedition **12,** p. 110, fig. 125a–b.

Truncatella vitiana Gould 1847 [1848] Proc. Boston Soc. Nat. Hist. **2,** p. 208 (Fiji Islands); Gould 1852, United States Exploring Expedition **12,** p. 109, fig. 126a–b.

Truncatella pacifica Pease 1867, American Journal of Conchology **3,** p. 230, pl. 15. fig. 27 (Insula Oualan (Oualau) [=Ovalau, Fiji Islands]).

Truncatella yorkensis Cox 1868, Monograph of Australian Land Shells, Sydney, p. 93, pl. 15, fig. 11 (Cape York [Queensland] Australia).

Truncatella cristata Crosse 1868, Journal de Conchyliologie **16,** p. 177 (locality unknown); Crosse 1871, Journal de Conchyliologie **19,** p. 66, pl. 3. fig. 11 (Tonga Islands).

Truncatella ferruginea Cox 1868, Monograph of Australian Land Shells, Sydney, p. 94 (Cape York [Queensland] Australia).

Truncatella concinna Pease 1871, Proc. Zool. Society, London, p. 468 (Apaiang [Kingsmill Ids.]).

Truncatella semperi Kobelt 1884, Nachrichtsblatt der Deutschen Malakozoologischen Gesellschaft **16,** p. 52 (Pangongon [?Bohol] Philippine Islands).

Truncatella fasciata Tapparone-Canefri 1886, Annali del Museo Civico Storia Naturale, Genova **24,** p. 193, pl. 2, fig. 24 (Wokan Island [Wokam] Aru Islands).

Description. Shell small, varying from 6 to 10 mm. in length, generally costate, rather dull and solid. Whorls 4½ and moder-

ately convex. Color ranging from dull gray to a dull reddish-brown. Spire lengthened and truncated. Suture moderately impressed. Aperture ovate, holostomatous, the inner margin attached to the parietal wall. Outer lip simple, occasionally flaring and somewhat thickened. Basal ridge usually well developed. Shell imperforate or only minutely rimate. Sculpture consisting of numerous axial costae. There are about 30 costae on the body whorl. Partially smooth forms are apparently quite rare. Operculum paucispiral, corneous and generally with a thin calcareous plate on the outer surface. In young specimens the first one to one and a half whorls are smooth, the remaining whorls becoming gradually more strongly costate.

length	width	
6.7	2.7 mm.	Lectotype
9.8	3.5	Batjan Id., Molucca Islands
7.5	3.3	Boga Id., Fiji Islands

Types. Lectotype, Museum of Comparative Zoölogy no. 177264 from the Island of Bourbon [Réunion], Indian Ocean, from Villa in the C. B. Adams collection.

We have examined type material of the following species: *concinna* Pease; *ferruginea* Cox; *guerinii* Villa; *pacifica* Pease; *valida* Pfeiffer; *vitiana* Gould; and *yorkensis* Cox.

Remarks. This is an extremely widespread species in the Indo-Pacific area. Like most other species of *Truncatella,* it is subject to considerable variation in size, shape and sculpture. This factor has brought about the long synonymy given above. In a large series of this species we have been unable to separate, either as species, subspecies or even valid races, the many named forms that exist.

It is most unfortunate that the better known name of *valida* Pfeiffer must be replaced by *guerinii* A. and J. B. Villa. The lectotype of *guerinii* is smaller than many specimens of the species that we have seen, but even this size occurs in our series from other localities in the Indo-Pacific.

Range. Most of Polynesia, Micronesia, Melanesia, Northern Australia, the East Indies, Philippines, southern Japan and west to Portuguese East Africa.

Records. SOCIETY ISLANDS: Tahiti (MCZ). MARIANA ISLANDS: Guam (MCZ). PALAU ISLANDS: Koror Id. (D.Thaanum). FIJI ISLANDS: Mbenga Id. (D. Thaanum); Boga Id. (MCZ). NEW CALEDONIA: Art Island; Noumea (both MCZ). SOLOMON ISLANDS: Harapa, Shortland Id. (AMNH); Guadalcanar Id. (MCZ). AUSTRALIA: Somerset, Cape York; Fitzroy Id., Queensland (both MCZ). MOLUCCA ISLANDS: Batjan (D. Fairchild). PHILIPPINE ISLANDS: Calapan, Mindoro; Catanduanes Id.; Malitgog, Leyte; Balabac Id.; Bahía de Ulugan, Palawan (all MCZ). JAPAN: Okinawa, LooChoo Ids. (MCZ). INDIA: Pondicherry (MCZ). INDIAN OCEAN ISLANDS: Nicobar Ids.; Réunion Id.; Mauritius (all MCZ). KENYA COLONY: Mombasa (MCZ).

Subgenus **Tomlinitella,** new name

Tomlinella Clench and Turner 1948, *Johnsonia* **2**, p. 159; *non Tomlinella* Viader 1938, Bull. Mauritius Inst. **1**, p. 6.

Subgenotype, *Truncatella scalaris* Michaud, original designation.

This subgenus is characterized by possessing only a few, but exceedingly strong, axial costae. So far as known, the costae are always strongly developed with little tendency toward reduction at the periphery of the whorl. These costae seldom if ever group to form a basal ridge. Lip generally duplex, the outer generally being an enlargement of the last costa, the inner being a slightly forward development of the body whorl. Operculum paucispiral and corneous without any accessory calcified plate so far as known.

Tomlinitella is known to occur only along the tropical and subtropical coasts of both sides of the Atlantic. Only two species and one subspecies are known so far in this subgenus.

Truncatella (Tomlinitella) scalaris *Michaud*

Rissoa scalaris Michaud 1830, Descr. Genre Rissoa, p. 18 [we have not seen this paper] (locality unknown); Michaud 1832, Descriptions de Plusieurs Nouvelles Espèces de Coquilles du Genre Rissoa (Freminville) 2nd. ed., p. 21, fig. 31–32.

Truncatella scalaris piratica *Clench and Turner*

Truncatella scalaris piratica Clench and Turner 1948, *Johnsonia* **2**, no. 25, p. 161, pl. 72, fig. 1–4 (St. George's Causeway, Bermuda).

Plate 23

Fig. 1. *Taheitia arcasiana* Crosse. Telenaua, near Varawa Bay, south coast Viti Levu, Fiji Islands (about 5×).

Fig. 2. *Taheitia arcasiana abbotti* Clench and Turner. Holotype, Lomoloma Hill, Lautoka, Viti Levu, Fiji Islands (about 5×).

Fig. 3. *Taheitia arcasiana cookei* Clench and Turner. Holotype, Vuni Vatu, central Viti Levu, Fiji Islands (about 5×).

Fig. 4. *Taheitia soluta* Clench and Turner. Holotype, Bavatu, Vanua Mbalavu, Fiji Islands (about 5×).

Fig. 5. *Taheitia porrecta* Gould. Tahiti, Society Islands (about 7½×).

Fig. 6. *Taheitia tongana* Clench and Turner. Holotype, Vaigana, Eua Island, Tonga Islands (about 7½×).

Fig. 7. *Geomelania* (*Scalatella*) *greyana* C. B. Adams. Lectotype, Yallah's Hill, Jamaica (about 7½×).

Fig. 8. *Geomelania* (*Merrilliana*) *elegans* C. B. Adams. Lectotype, Jamaica (about 7½×).

Fig. 9. *Blandiella reclusa* Guppy. Lectotype, Oropuche Mountains, Trinidad (about 7½×).

Fig. 10. *Geomelania* (*Geomelania*) *media* C. B. Adams. Lectotype, Jamaica (about 5×) = *G. jamaicensis* Pfeiffer.

Fig. 11. *Geomelania* (*Chittia*) *sinuosa* Chitty. Lectotype, Ashly Hall, Trelawny, Jamaica (about 11×).

Fig. 12. *Truncatella guerinii* Villa. Lectotype, Island of Bourbon (about 5×).

Fig. 13. *Truncatella valida* Pfeiffer. Cotype, Philippine Islands (about 5×) = *T. guerinii* Villa.

Fig. 14. *Geomelania* (*Merrilliana*) *haitensis* Weinland. South of Coteaux, Dept. du Sud, Haiti, Hispaniola (about 11×).

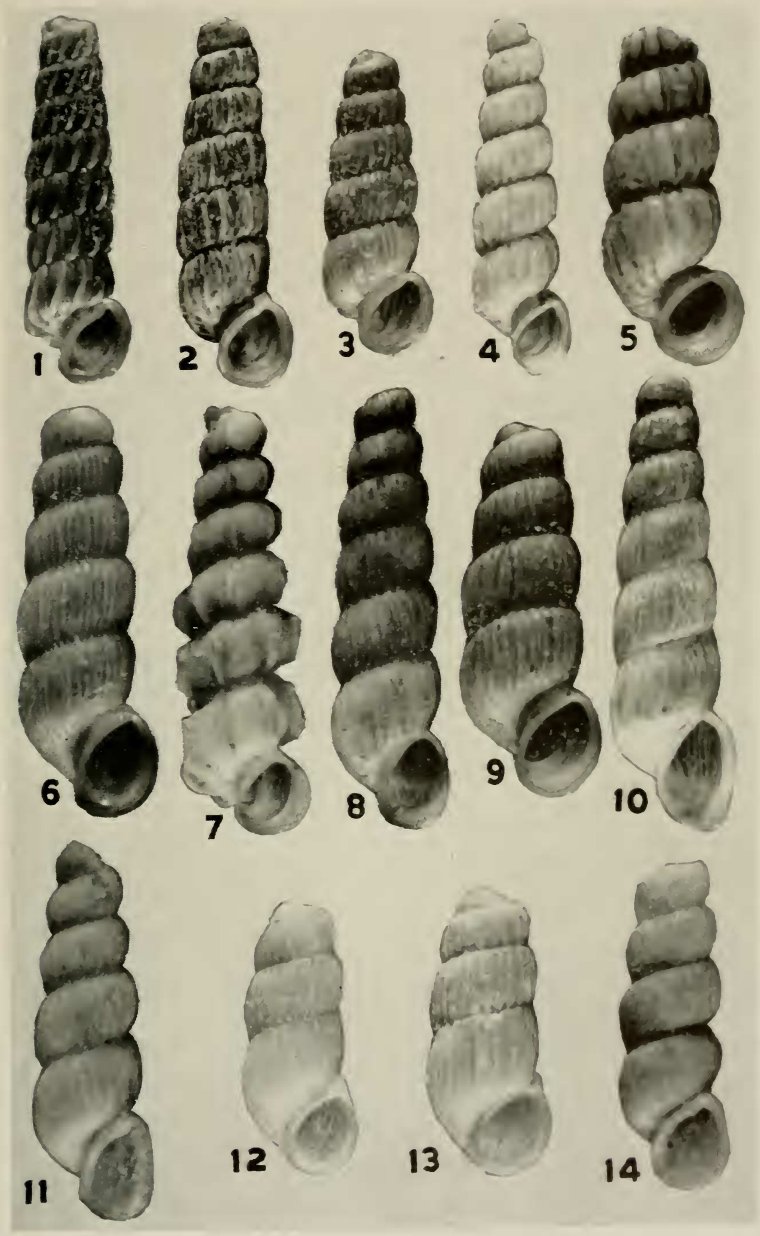

Plate 23

Photographs by F. P. Orchard

Truncatella (Tomlinitella) rostrata *Gould*

Truncatella rostrata Gould 1847 [1848], Proc. Boston Soc. Nat. Hist. **2,** p. 209 (Rio de Janeiro [Brazil]); United States Exploring Expedition **12,** p. 111, pl. 8, fig. 128a–b. [This locality is certainly in error, as this species comes from the west coast of Africa. See Clench and Turner 1948, pp. 162–164, pl. 73].

Truncatella princeps Dohrn 1866, Malakozoologische Blätter **13,** p. 134, (Ilha do Principe [Princes Island, Gulf of Guinea, Africa]); Pfeiffer 1867, Novitates Conchologicae **3,** p. 317, pl. 76, fig. 10–11.

* * * *

Comparatively little published material has appeared upon the genus *Geomelania.* Very fortunately, Sykes (1925) has figured most of the species contained in the Chitty collection: species described by both E. Chitty and C. B. Adams, and a few species loaned from the Adams collection, then at Amherst College.

We have attempted to outline the genus and give such synonymies as appear evident from the material at hand which includes most of the type specimens of the species described by C. B. Adams. However, far more material must be obtained for any real taxonomic understanding of this very complex genus and the distribution of the various specific elements.

Genus **Geomelania** *Pfeiffer*

Geomelania Pfeiffer 1845, Proc. Zool. Soc., London, p. 45.

Genotype, *Geomelania jamaicensis* Pfeiffer, monotypic.

Shells elongate, usually truncated in the adult stage, usually sculptured. The axial sculpture, when present, in the form of costae; spiral sculpture seldom present and then consisting only of very fine threads between the costae. The last whorl partially free or adnate. Outer margin of the lip straight or sinuous and sometimes with a small basal extension or with a partially closed sinus near its upper margin. Operculum may be with or without a thin calcified plate on the outer face of a paucispiral chitinized base. In *Geomelania* s.s., the operculum is thin, paucispiral and consists entirely of chitin.

Vendryes (1899, p. 605) reports that *Geomelania greyana* C. B. Adams, *beardsleana* C. B. Adams, and *pygmaea* C. B. Adams possess an external, calcified and rugose plate on the operculum. We have not seen the opercula of these three species.

So far as now known, the genus *Geomelania* occurs in eastern Cuba, southwestern Hispaniola, Jamaica and the Cayman Islands.

The Jamaican species in this genus have been complicated unduly by C. B. Adams. His collection is now in our possession and, with few exceptions, most of his species were based upon very few individuals. He carried to excess the naming of slight variations, and as few of these forms have ever been figured, his names have remained more or less unknown for nearly one hundred years.

Geomelania, particularly the subgenus *Geomelania*, exhibits considerable variation in the lip structure, especially in the formation of the tongue-like process on the outer lip. The differences exhibited by many of the specimens named by Adams are due merely to an age factor. In other words, the older the specimen, the greater the degree to which the tongue-like process has been developed. In addition, the curvature of the sigmoid outline (in profile) of the lip has been intensified. These characters were used by Adams to separate individuals into categories under the heading of different species.

Subgenus **Geomelania** *Pfeiffer*

Geomelania Pfeiffer 1845, Proc. Zool. Soc., London, p. 45.

Subgenotype, *Geomelania jamaicensis* Pfeiffer, monotypic.

Shells elongate, truncated in the adult stage. Generally with numerous strongly developed axial costae. Aperture attached, flaring and possessing a small tongue-like process on the outer lip near its base. Operculum thin, paucispiral and chitinous.

Geomelania (Geomelania) jamaicensis *Pfeiffer*
Plate 23, fig. 10

Geomelania jamaicensis Pfeiffer 1845, Proc. Zool. Soc. London **13,** p. 45, (Savanna la Mar, Jamaica); Pfeiffer 1846, Conchy.-Cab. (1) **19,** p. 214, pl. 30, fig. 19–20; Sykes 1905, Proc. Malacological Soc. London **6,** p. 225, fig. 2.

Geomelania expansa C. B. Adams 1849, Contributions to Conchology no. 2, p. 18 (Jamaica); Sykes 1925, Proc. Malacological Soc. London **26,** p. 180, pl. 8, fig. 17.

Geomelania fortis C. B. Adams 1850, Contributions to Conchology no. 6, p. 94 (Jamaica); Sykes 1925, above, p. 180, pl. 8, fig. 12.

Geomelania magna C. B. Adams 1850, Contributions to Conchology no. 6, p. 94 (Jamaica); Sykes 1925, above, p. 179, text figure 2.

Geomelania gracilis C. B. Adams 1850, Contributions to Conchology no. 6, p. 95 (Jamaica); Sykes 1925, above, p. 180, pl. 8, fig. 8.

Geomelania gracilis var. *parva* C. B. Adams 1850, Contributions to Conchology no. 6, p. 95 (Jamaica); Sykes 1925, above, p. 180, pl. 8, fig. 9; *non parva* Chitty.

Geomelania procera C. B. Adams 1850, Contributions to Conchology no. 6, p. 95 (Jamaica); Sykes 1925, above, p. 180, pl. 8, fig. 14.

Geomelania media C. B. Adams 1850, Contributions to Conchology no. 6, p. 96 (Jamaica); Sykes 1925, above, p. 180, pl. 8, fig. 11.

Geomelania alata 'C. B. Adams' Paetel 1889, Catalog der Conchylien-Sammlung **2,** p. 431 (Jamaica); [nude name].

Geomelania (Geomelania) typica *C. B. Adams*

Geomelania minor Pfeiffer 1850, Conchy.-Cab. (1) **19,** p. 214, pl. 30, fig. 21–22 (Jamaica); *non minor* C. B. Adams 1849.

Geomelania typica C. B. Adams 1850, Contributions to Conchology no. 6, p. 95 (Jamaica); Sykes 1925, Proc. Malacological Soc. London **26,** p. 180, pl. 8, fig. 18.

Geomelania typica pygmaea C. B. Adams 1850, Contributions to Conchology no. 6, p. 96 (Jamaica); *non pygmaea* C. B. Adams 1845.

Geomelania vicina C. B. Adams 1850, Contributions to Conchology no. 6, p. 96 (Jamaica); Sykes 1925, above, p. 180, pl. 8, fig. 15.

Geomelania conica C. B. Adams 1850, Contributions to Conchology no. 6, p. 97 (Jamaica); Sykes 1925, above, p. 179, text figure 3.

Geomelania (Geomelania) minor *C. B. Adams*
Plate 22, fig. 4

Geomelania minor C. B. Adams 1849, Contributions to Conchology no. 2, p. 18 (Jamaica); Sykes 1925, above, p. 180, pl. 8, fig. 13; *non minor* Pfeiffer 1850.

Geomelania minor densecostata H. B. Baker 1935, Nautilus **48,** p. 83, pl. 3, fig. 5 (W. of Marshall Pen and E. of Mandeville-Somerset River (Jamaica).

The species listed below apparently belong in *Geomelania* s.s. No specimens remain in the C. B. Adams collection under these names. The unique type of *G. hilliana* is in the Chitty collection.

Geomelania (Geomelania) hilliana *C. B. Adams*

Geomelania hilliana C. B. Adams 1851, Contributions to Conchology no. 9, p. 159 (Jamaica); Sykes 1925, above, p. 180, pl. 8, fig. 10.

Geomelania (Geomelania) pyramidata *C. B. Adams*

Geomelania pyramidata C. B. Adams 1851, Contributions to Conchology no. 9, p. 159 (Jamaica); Sykes 1925, above, p. 180, pl. 8, fig. 16.

Geomelania (Geomelania) affinis *C. B. Adams*

Geomelania affinis C. B. Adams 1850, Contributions to Conchology no. 6, p. 96 (Jamaica).

Geomelania jamaicensis 'Pfeiffer' C. B. Adams 1849, Contributions to Conchology no. 2, p. 18 (Jamaica).

Geomelania jamaicensis 'Pfeiffer' Petit 1851, Journal de Conchyliologie **2**, p. 81, pl. 2, fig. 4 (Jamaica).

Geomelania cumingi Dean 1933, Journal of Conchology **19**, p. 331, fig. 5–6 [new name for *Geomelania jamaicensis* 'Pfeiffer' C. B. Adams; *non Geomelania jamaicensis* Pfeiffer].

Geomelania (Geomelania) peilei *Dean*

Geomelania peilei Dean 1933, Journal of Conchology **19**, p. 333, fig. 7–9 (Montpelier, St. James, Jamaica).

Geomelania (Geomelania) inornata *Chitty*

Geomelania inornata Chitty 1853, Contributions to Conchology, Kingston, Jamaica, no. 1 [13] p. 5 (Jamaica); Sykes 1925, above, p. 180, pl. 8, fig. 19.

Geomelania (? subgenus) pauperata *C. B. Adams*

Geomelania pauperata C. B. Adams 1850, Contributions to Conchology no. 6, p. 97 (Jamaica).

This species is not in the Adams collection and apparently not in the Chitty collection in the British Museum.

Plate 24. Opercula of the Truncatellidae

Fig. 1. *Taheitia arcasiana abbotti* Clench and Turner

Fig. 2. *Truncatella pulchella* Pfeiffer

Fig. 3. *Geomelania* (*Merrilliana*) *elegans* C. B. Adams (dotted area indicates muscle scar).

Fig. 4. *Blandiella reclusa* Guppy

Fig. 5. *Taheitia soluta* Clench and Turner (profile view).

Fig. 6. *Taheitia soluta* Clench and Turner

There is a calcareous plate on the operculum in many species of the Truncatellidae. In *Taheitia*, the calcareous plate is greatly developed with an elaborate sculpture and in thickness may be almost as high as the operculum is long (fig. 5–6). *Blandiella reclusa* (fig. 4) also has a thickened calcareous plate but it does not equal the development of this plate in certain species of *Taheitia*. The development of the calcareous plate varies in *Truncatella* and is usually thin when present. It has been reported in certain species of *Geomelania*.

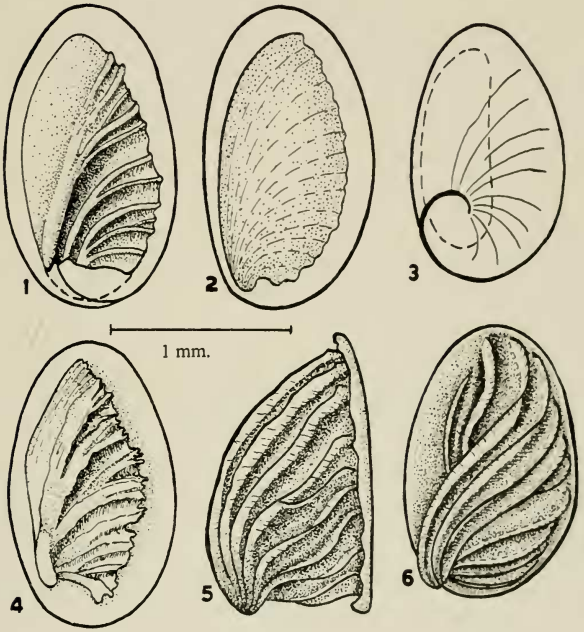

Plate 24
Drawn by Ruth D. Turner

Subgenus **Chittia** *H. and A. Adams*

Chittia 'Livesay' H. and A. Adams 1858, The Genera of Recent Mollusca **2,** p. 647.

Chittya 'Livesay' Pfeiffer 1865, Mono. Pneumonopomorum Viventium **3,** p. 2 [emendation for *Chittia* H. and A. Adams].

Subgenotype, *Geomelania sinuosa* Chitty, monotypic.

Shells elongate, truncated and sculptured with numerous fine axial costae. Last whorl slightly free near the aperture, holostomatous and with a reflected lip. Near the upper margin of the lip there is a well defined sinus which is somewhat constricted at the margin of the lip. Operculum unknown.

Geomelania sinuosa Chitty is the only known species in this subgenus.

Geomelania (Chittia) sinuosa *Chitty*
Plate 23, fig. 11

Geomelania sinuosa Chitty 1853, Contributions to Conchology no. 1, [no. 13], p. 5 (Ashley Hall, Trelawny, Jamaica); H. and A. Adams, 1858, The Genera of Recent Mollusca **3,** pl. 138, fig. 14.

Subgenus **Scalatella** *von Martens*

Scalatella von Martens 1860, Die Heliceen, Leipzig, p. 41.

Subgenotype, *Cylindrella greyana* C. B. Adams, monotypic.

Shells elongate, truncated, sculpture consisting of few but exceedingly high blade-like costae which may be rounded or pointed at the whorl periphery. Last whorl attached or very slightly free at the aperture which is holostomatous. Operculum unknown to us.

Vendryes reports that *G. greyana* C. B. Adams possesses a calcified plate on the operculum.

Geomelania greyana C. B. Adams is the only known member of this subgenus.

Geomelania (Scalatella) greyana *C. B. Adams*
Plate 23, fig. 7

Cylindrella greyana C. B. Adams 1850, Contributions to Conchology no. 5, p. 82 (Jamaica).

We here select Yallah's Hill, 20 miles E. of Kingston, Jamaica to be the type locality. This is based upon the material (lectotype, MCZ 177215) from E. Chitty who gave the original specimens to C. B. Adams.

Subgenus **Merrilliana,*** new subgenus

Subgenotype, *Truncatella elegans* C. B. Adams.

Shells elongate, truncated in the adult stage, sculpture consisting of numerous fine axial costae. Spiral sculpture, when present, consisting of numerous fine threads between the costae. Aperture holostomatous, ovate, upright to slightly reflected. The last whorl attached or slightly free at the aperture. Operculum thin, paucispiral and chitinous in *C. elegans* C. B. Adams. Vendryes reports (1899, p. 605) that *G. beardsleana* C. B. Adams and *pygmaea* C. B. Adams possess a calcified plate on the operculum, but this we have been unable to confirm.

Various species in this subgenus occur in Jamaica, Hispaniola, Cuba and the Cayman Islands. These are as follows:

JAMAICA

G. beardsleana C. B. Adams
G. costulosa C. B. Adams
G. elegans C. B. Adams
G. exilis C. B. Adams
G. parvulina Clench and Turner
G. pygmaea C. B. Adams
G. striosa C. B. Adams
G. striosa pumila H. B. Baker
G. jarvisi Sykes

HISPANIOLA

G. haitensis Weinland

CUBA

G. elongata Pfeiffer
G. lirata Poey

CAYMAN ISLANDS

G. alemon Pilsbry

* Named for Dr. Merrill E. Champion, Research Assistant in the Department of Mollusks, Museum of Comparative Zoölogy.

Species of Jamaica

Geomelania (Merrilliana) pygmaea *C. B. Adams*

Cylindrella (?) *pygmaea* C. B. Adams 1845, Proc. Boston Society Natural History **2**, p. 14 (Jamaica); *non Geomelania pygmaea* C. B. Adams 1850.

Geomelania (Merrilliana) parvulina, new name

Geomelania parva Chitty 1853, Contributions to Conchology, Kingston, Jamaica no. 1 [no. 13] p. 6 (Peace River, Manchester, Jamaica); Sykes 1925 Proc. Malacological Soc. London **26**, p. 180, pl. 8, fig. 4; *non parva* C. B. Adams 1850.

Geomelania (Merrilliana) beardsleana *C. B. Adams*

Cylindrella beardsleana C. B. Adams 1849, Contributions to Conchology no. 2, p. 19 (Jamaica).

Geomelania (Merrilliana) elegans *C. B. Adams*
Plate 22, fig. 5; Plate 23, fig. 8; Plate 24, fig. 3

Geomelania elegans C. B. Adams 1849, Contributions to Conchology no. 2, p. 18 (Jamaica); Sykes 1925, above, p. 179, text fig. 1.

Geomelania (Merrilliana) striosa *C. B. Adams*

Geomelania striosa C. B. Adams 1850, Contributions to Conchology no. 6, p. 96 (Jamaica); Sykes 1925, above, p. 180, pl. 8, fig. 7.

Geomelania (Merrilliana) striosa pumila *H. B. Baker*

Geomelania (*Scalatella*) *striosa pumila* H. B. Baker 1935, Nautilus **48**, p. 83, pl. 3, fig. 6 (eastern end of John Crow Mts., near Portland–St. Thomas boundary, Jamaica).

Geomelania (Merrilliana) exilis *C. B. Adams*

Geomelania exilis C. B. Adams 1850, Contributions to Conchology no. 6, p. 97 (Jamaica); Sykes 1925, above, p. 179, pl. 8, fig. 6.

Geomelania (Merrilliana) costulosa *C. B. Adams*

Geomelania costulosa C. B. Adams 1850, Contributions to Conchology no. 6, p. 96 (Jamaica); Sykes 1925, above, p. 179, pl. 8, fig. 5.

Geomelania (Merrilliana) jarvisi *Sykes*

Geomelania jarvisi E. R. Sykes 1905, Proc. Malacological Soc. London **6**, p. 226, fig. 1 (near Albert Town, Trelawny, Jamaica).

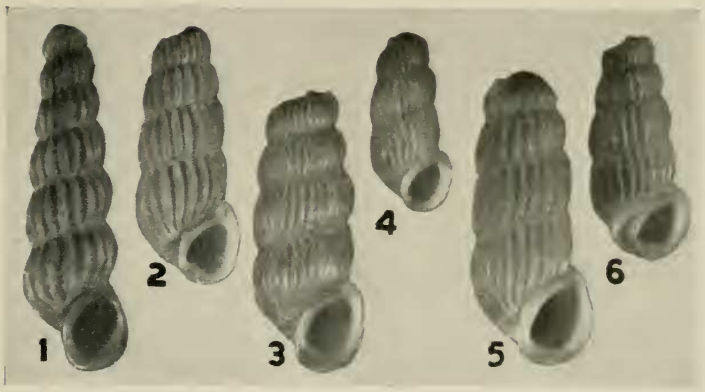

Plate 25

Photographs by F. P. Orchard

Fig. 1. *Taheitia turricula* Mousson. Tuvutha Island, Lau Group, Fiji Islands.

Fig. 2. *Truncatella rustica* Mousson. Lectotype, Uvea (Wallis Island).

Fig. 3. *Truncatella avenacea* Garrett. Vanua Mbalavu, Fiji Islands.

Fig. 4. *Truncatella granum* Garrett. Lectotype, Taviuni Island, Fiji Islands.

Fig. 5. *Truncatella kiusiuensis* Pilsbry. Paratype, Tane-ga-shima, Hirado, Hizen, Japan.

Fig. 6. *Truncatella thaanumi* Clench and Turner. Holotype, Ulali Island, Truk group, Caroline Islands.

(All about 5×.)

Species of Hispaniola

Geomelania (Merrilliana) haitensis *Weinland*
Plate 23, fig. 14

Truncatella (*Blandiella*) *haitensis* Weinland 1876, Malakozoologische Blätter **23**, p. 172 (Mts. near Jérémie, Haiti); Pfeiffer 1876, *ibid.*, p. 233, pl. 2, fig. 12–14.

So far as we can trace, this species has never been recorded since the original publication by Weinland given above. The United States National Museum has several lots, all collected by C. R. Orcutt. We list the following localities based on this material. It would appear that this species occurs only in the "Tiburon" or southwestern peninsula of Haiti.

Mountains near Jérémie (paratypes MCZ no. 90391); Couteau; Dalmarie; Damassins; Les Cayes; Ravine west of Metesignix; St. Louis; south of Trou Sardines.

Species of Cuba

Geomelania (Merrilliana) lirata *Poey*

Truncatella lirata Poey 1858, Memorias sobre la Historia Natural de la Isla de Cuba **2**, p. 25, 89 (Gibara, Holguín, Cuba).

Truncatella wrighti Pfeiffer 1862, Malakozoologische Blätter **9**, p. 127 (Yateras, Guantánamo, Cuba).

Geomelania (Merrilliana) elongata *Pfeiffer*

Truncatella elongata 'Poey' Pfeiffer 1856, Monographia Auriculaceorum Viventium **1**, p. 193; Poey 1858, Memorias sobre la Historia Natural de la Isla de Cuba **2**, p. 25, 89 (Oriente, Cuba [Gibara, Holguín, Cuba]).

Truncatella filicosta 'Gundlach' Poey 1858, Memorias sobre la Historia Natural de la Isla de Cuba, Habana **2**, p. 90 (Caimanera, Guantánamo, Cuba).

Species of the Cayman Islands

Geomelania (Merrilliana) alemon *Pilsbry*

Geomelania alemon Pilsbry 1942, Nautilus **56**, p. 3, pl. 1, fig. 9 (Boilers, near Georgetown, Grand Cayman, Cayman Islands).

Genus **Blandiella** *Guppy*

Blandiella Guppy 1871, American Journal of Conchology **6**, p. 309.

Genotype, *Blandiella reclusa* Guppy, monotypic.

Shell elongate, truncated in the adult stage. Sculpture consisting of numerous fine axial costae. Aperture ovate, slightly reflected, holostomatous. Last whorl free near the aperture leaving a well defined parietal gap. Operculum paucispiral with a calcified plate on the outer surface which is ridged, the ridges curved and emanating from a common center over the nucleus.

The genus *Blandiella* is known to occur only on the island of Trinidad. In relationship of its shell characters, it appears nearest to the subgenus *Merrilliana* in the genus *Geomelania* but it differs in lacking spiral lirae, a character more or less developed in nearly all species of *Merrilliana.* The radula indicates a closer relationship to *Truncatella* (Plate 22, fig. 1 and 2) than it does to *Geomelania* (Plate 22, fig. 4 and 5).

Blandiella reclusa Guppy is the only known species in this genus.

Blandiella reclusa *Guppy*

Plate 22, fig. 1; Plate 23, fig. 9; Plate 24, fig. 4

Blandiella reclusa Guppy 1871, American Journal of Conchology **6**, p. 309, pl. 17, fig. 7–8 (Oropuche Mts., Trinidad).

* * * *

The following is an outline of the genus *Taheitia* with a list of all the known species.

Genus **Taheitia** *H. and A. Adams*

Taheitia H. and A. Adams 1863, Ann. Mag. Nat. Hist. (3) **11**, p. 19 (Genotype, *Truncatella porrecta* Gould, monotypic).

Tahitia Adams and Angas 1865, Proc. Zool. Soc., London, pl. 2, fig. 2 [error for *Taheitia* H. and A. Adams, on plate caption only].

Taheitea Pease 1867, American Journal of Conchology **3**, p. 229 [error for *Taheitia* H. and A. Adams].

Tahetia Tapparone Canefri 1886, Ann. Museo Civico Storia Nat. Genova **24**, p. 198 [error for *Taheitia* H. and A. Adams].

Genotype, *Truncatella porrecta* Gould, monotypic.

Shells small, rarely exceeding 10 mm. in length in the adult truncated form. Sculpture consisting of axial costae which are seldom rounded but are most frequently blade-like. So far as known the axial costae always persist over the mid portion of the whorls. No spiral sculpture present. Lip moderately to greatly reflected. Operculum paucispiral with a heavy calcified and rugose plate on the outer surface.

The genus *Taheitia* is closely related to *Truncatella*; certain of its species, such as *porrecta* Gould and *scalariformis* Reeve are very similar to species of Pacific *Truncatella.* They differ in being more delicate in structure, having the costae finer and blade-like and in possessing a very well developed calcareous plate on the outer surface of the operculum. They are strictly terrestrial in habit, though it is interesting to note that the species that most closely approximate the species of *Truncatella* are to be found in the lowlands and nearest the sea. Other species of *Taheitia*, such as *arcasiana* Crosse, *turricula* Mousson, both from the Fiji Islands, and *alata* Quadras and v. Möllendorff from Guam, are quite different from typical *Truncatella.* In most cases, these latter species have been found in the interior of the larger and high islands of the western Pacific.

From the limited material we have had at hand for study, it would appear that the various species are somewhat colonial in habit and scattered in their distribution.

We list all the species that are known or are believed to be members of *Taheitia.* It is quite possible that certain species listed in our catalogue and originally described as *Truncatella* may eventually prove to be species in *Taheitia.*

Taheitia scalariformis *Reeve*

Truncatella scalariformis Reeve 1842, Conchologia Systematica **2,** p. 94, pl. 182, fig. 6 (locality not given); Reeve, 1842 [1843], Proc. Zool. Soc. London **10,** p. 197 (Annaa Id. [Tuomoto Islands]).

Truncatella arctecostata Mousson 1869, Journ. de Conchyliologie **17,** p. 68 (Iles Paumotou [Tuomoto Islands]).

Taheitia pallida *Pease*

Taheitea [sic] *pallida* Pease 1867, American Journal Conchology **3**, p. 229 (Tahiti and Huaheine [Society Islands]).

Truncatella cylindrica 'Pease' Cuming and H. Adams 1864 [1865], Proc. Zool. Soc. London, p. 676 [nude name].

Truncatella cylindracea 'Pease' Nevill 1878, Hand List of Mollusca in the Indian Museum **1**, p. 253 (Pacific Islands) [nude name].

Taheitia porrecta *Gould*

Plate 23, fig. 5

Truncatella porrecta Gould 1847 [1848], Proc. Boston Soc. Nat. Hist. **2**, p. 208 (Taheiti, Society Islands); Gould 1852, United States Exploring Expedition **12**, p. 110, pl. 8, fig. 127a–c.

Taheitia arcasiana *Crosse*

Plate 23, fig. 1

Truncatella arcasiana Crosse 1868, Journal de Conchyliologie **16**, p. 177 (Viti [Fiji Islands]).

Description. Shell reaching about 11 mm. in length, truncated, coarsely sculptured, moderately strong and imperforate. Whorls seven, slightly convex to nearly straight-sided. Color gray to slightly pale reddish-brown. Aperture holostomatous, auriculate, white to yellow-ivory in color and with a strongly reflected lip. Aperture built forward, having a definite gap between the lip and the whorl above—the parietal gap. Columella not apparent. Spire extended and abruptly truncated. Sculpture consisting of strong axial costae with each second or third costa enlarged and blade-like, particularly below the periphery. These enlarged costae may extend over the margin of the suture and encroach somewhat on the whorl below. No spiral sculpture visible. There are 8 to 11 completed costae on the body whorl. Operculum unknown. Periostracum deciduous. We have not seen any young specimens of this species.

length	width	
10.8	3.2 mm.	Viti Levu, Fiji Islands
10.9	3	Near Varawa, Viti Levu, Fiji Islands
9.9	2.8	" " " " " "
9.3	2.8	" " " " " "

Types. The types of this species are very probably in the collection of the Journal de Conchyliologie. The original type locality was given only as Viti [Fiji Islands]. We here restrict the type locality to near Varawa Bay, south coast of Viti Levu, Fiji Islands.

Remarks. Taheitia arcasiana differs from both *cookei* and *abbotti* by having fewer completed costae on the body whorls and in addition, the blade-like structures at the base of the costae are far better developed in *T. arcasiana* than in either of the subspecies. *T. arcasiana* differs from *abbotti* by having the whorls more convex and having a proportionally wider shell. From *cookei* it also differs by being larger.

Taheitia arcasiana cookei, new subspecies
Plate 33, fig. 3

Truncatella alternans Mousson 1869, [in] Museum Godeffroy, Hamburg, Catalogue no. 4, p. 76 (Vuni Vatu, central Viti Levu, Fiji Islands. E. Gräffe, collector) [nude name]; *non T. alternans* Mousson 1874.

Description. Shell about 7.5 to 9 mm. in length, truncated, coarsely sculptured, rather heavy and imperforate. Whorls six and moderately convex. Color a rather shiny gray. Aperture holostomatous, auriculate, whitish in color and having a strongly reflected lip. Aperture built forward, having a gap between the inner lip and the whorl above. Spire extended and abruptly truncated. Sculpture consists of numerous and fairly uniform axial costae. Every second costa and occasionally every third costa on the body whorl becoming slightly enlarged and blade-like at the base, the intervening costae not always extending from suture to suture. There are 11 to 15 completed costae on the body whorl. No spiral sculpture apparent (48x) though the intercostal areas are minutely granular. Young specimens having the first $2\frac{1}{2}$ to 3 whorls smooth, the remaining whorls costate. The second to third whorls are nearly the same size but beyond these the whorls become increasingly larger.

length	width	
7.5	3 mm.	Holotype
8	2.7	Paratype
8.3	3	"
9.2	3	"

Types. Holotype, Museum of Comparative Zoölogy no. 181049, Vuni Vatu, central Viti Levu, Fiji Islands, E. Gräffe, collector, ex Museum Godeffroy. Paratypes, Museum of Comparative Zoölogy and the B. P. Bishop Museum, from 2½ miles at 2300′ and 3½ miles at 2700′ southwest of Nandarivatu, Viti Levu, Fiji Islands, Y. Kondo, collector, 1938.

Remarks. Mousson did not describe *T. alternans.* He introduced this name in the catalogue of the Museum Godeffroy and later considered his species to be the same as *arcasiana* Crosse. We possess a specimen labeled as a type of Mousson's *alternans*, received originally from the Museum Godeffroy. It is different subspecifically from *arcasiana* as described by Crosse. Apparently Mousson had two species, neither of which was *arcasiana.* The specimens originally sent out by the Museum Godeffroy under the name of *alternans* were quite different from *arcasiana.*

T. arcasiana cookei differs from both *arcasiana* and *abbotti* by being smaller, having more convex whorls and by having the blade-like processes of the costae less developed. Also the parietal gap is far less developed in this subspecies.

Taheitia arcasiana abbotti, new subspecies
Plate 22, fig. 3; Plate 23, fig. 2; Plate 24, fig. 1

Truncatella arcasiana 'Crosse' Mousson 1870, Journal de Conchyliologie **18,** p. 196, pl. 7, fig. 13 (Vuni Vatu, central Viti Levu, Fiji Islands); *non arcasiana* Crosse 1868.

Description. Shell about 8 mm. in length, truncated, coarsely sculptured, structure moderately heavy and imperforate. Whorls 5½ to 6½ and slightly convex. Color a rather dull amber with the costae whitish. Aperture holostomatous, auriculate, yellow-ivory in color, and with a strong reflected lip. Aperture built forward, having a definite gap between the inner lip and the whorl above. Columella not apparent. Spire extended, abruptly truncated. Axial sculpture consisting of numerous, somewhat irregular costae. In general, alternate costae are much larger and reach from suture to suture. The smaller costae between start from the superior suture and usually disappear just before reaching the inferior suture. These

costae, however, are variable and occasionally there are two or even three smaller costae between the larger ones. There are 11 to 15 completed costae on the body whorl. There is no spiral sculpture discernible. Nuclear whorls smooth with the first whorl flattened on top. In young specimens the spire is slightly concave with the last whorl showing a strongly angled periphery, the costae below being reduced to faint threads. Periostracum dark amber and deciduous, the shell chalky-white underneath. Operculum possessing a striated calcareous plate on a horny base, the calcareous portion being outermost. The striae radiate from the nucleus which is on the parietal margin.

length	width	aperture	
9	2.5	2×1.7 mm.	Holotype
11	2.8	2.3×1.6	Near Lautoka, Viti Levu, Fiji Islands
7.8	2.9	1.6×1.2	Korovau, Viti Levu, Fiji Islands

Types. Holotype, Museum of Comparative Zoölogy 179578, first gulley from west, North side of Lomoloma Hill, 9 miles S. of Lautoka, N. W. Viti Levu, Fiji Islands, collected by R. T. Abbott, Harvard-Archbold Expedition, December 1940. Paratypes from the same locality and from Korovau, Viti Levu, Fiji Islands, collected by O. Degener, Harvard-Archbold Expedition, April 1941, and Sigatoka, Viti Levu, H. S. Ladd, collector. This last locality is based on specimens in the B. P. Bishop Museum no. 88541.

Remarks. The reference above by Mousson is to this new form and not to *T. arcasiana* Crosse as he thought.

T. arcasiana abbotti differs from typical *arcasiana* in having the blade-like portion of the costae far less developed and having less convex whorls. From *T. arcasiana cookei* it differs in being larger, less convex and having a much wider parietal gap.

Taheitia turricula *Mousson*
Plate 25, fig. 1

Truncatella turricula Mousson 1869, [in] Museum Godeffroy, Hamburg, Catalog 4, p. 76 (Mango Island [Lau Group, Fiji Islands]) [nude name]; Mousson 1870, Journal de Conchyliologie **18**, p. 196.

This species has rather widely separated and strong costae. The aperture, though holostomatous, has a very narrow parietal gap.

We have seen specimens from Naiau Island, Navutu Iloma Island and Mango Island in the Lau Group, Fiji Islands. All these lots are in the collection of the B. P. Bishop Museum.

Taheitia turricula laddi, new subspecies

This subspecies is rather closely related to *T. turricula* Mousson. It differs, however, in its smaller size and much finer and more closely-set costae. There are 26 costae on the body whorl of *laddi* and only 16 on the body whorl of *turricula*, and the costae of *laddi* are more blade-like. Shell white, aperture holostomatous with an exceedingly narrow parietal gap.

length	width	
7.5	2.5 mm.	Holotype

Types. Holotype, B. P. Bishop Museum no. 167165 from the south end of Yangasa Levu, Lau Group, Fiji Islands. Paratype, Museum of Comparative Zoölogy no. 157850, from the northeast end of Navutu Iloma, Lau Group, Fiji Islands.

Taheitia funiculus *Mousson*

Truncatella funiculus Mousson 1869, [in] Museum Godeffroy, Hamburg, Catalog no. 4, p. 76 (Intérieur de Viti Levu [Fiji Islands]) [nude name]; Mousson 1870, Journal de Conchyliologie **18,** p. 197.

There is considerable question as to whether or not this species came from the interior of Viti Levu, the largest of the Fiji Islands. It probably came from one of the islands in the Lau Group.

This species is very close in its relationships to *T. turricula* Mousson and has about the same number of costae on the body whorl. It differs, however, in having the costae a little more blade-like, in its smaller size and its somewhat wider parietal gap.

Taheitia soluta, new species
Plate 23, fig. 4; Plate 24, fig. 5–6

Description. Shell reaching about 9 mm. in length, truncated and rather coarsely sculptured, rather thin and imperforate. Whorls six and only slightly convex. Color whitish to gray. Aperture holostomatous, auriculate to subovate, with a moderately reflected lip. Aperture built forward producing a pronounced parietal gap. Last whorl solute, free for about one third of a whorl. Sculpture consisting of numerous very thin blade-like axial costae, all more or less uniform in structure but varying slightly in spacing, particularly on the mid whorls. There are 15 costae on the body whorl. No spiral sculpture visible. Operculum paucispiral with a very strongly developed calcareous plate. The calcareous portion consists of blade-like costae all evolving from a common point which is built up as high as the aperture is wide. The high point is more or less over the nucleus.

length	width	
9	2.5 mm.	Holotype
9.1	2.6	Paratype
8.1	2.4	"

Types. Holotype, B. P. Bishop Museum no. 179895, Bavatu, Vanua Mbalavu, Lau Group, Fiji Islands. Paratypes, Museum of Comparative Zoölogy no. 157754 from the same locality.

Remarks. This species is probably distantly related to *turricula* Mousson from which it differs by having the costae blade-like and not rounded and having a larger parietal gap with a correspondingly greater portion of the last whorl free.

Taheitia tongana, new species
Plate 23, fig. 6

Description. Shell reaching about 8 to 9 mm. in length, truncated, finely sculptured, rather thin and imperforate. Whorls five and strongly convex. Color yellowish to gray. Aperture holostomatous, auriculate to subovate, with a strongly reflected lip. Aperture built forward, having a definite parietal gap. Spire extended and abruptly truncated. Sculpture consisting of very fine blade-like axial costae, all being uniform. There

are 37 to 42 costae on the body whorl. No spiral sculpture visible. There is a slight tendency toward forming a basal ridge. Operculum with a calcareous plate, having very strong curved, radial ridges.

length	width	
6.8	2.5 mm.	Holotype
7.1	2.5	Paratype
7	2.5	"

Types. Holotype, B. P. Bishop Museum no. 87703, from inland one half mile from Vaigana, Eua Island, Tonga Islands on cliffs at 760′ elevation, H. S. Ladd and J. E. Hoffmeister collectors, May 1928. Paratypes from the same locality, Museum of Comparative Zoölogy no. 157757.

Remarks. This species appears to be distantly related to *Taheitia turricula* Mousson of the Fiji Islands. It differs mainly by having exceedingly fine and very numerous axial costae.

Taheitia clathrata *A. Adams and G. F. Angas*

Truncatella (*Taheitia*) *clathrata* A. Adams and G. F. Angas 1865, Proc. Zool. Soc. London, p. 54, pl. 2, fig. 2 (Solomon Islands).

Taheitia schneideri *Rensch*

Truncatella schneideri Rensch 1937, Archiv für Naturgeschichte N. F. **6**, pt. 4, p. 628, fig. 51–52 (Neu-Pommern Id., Bismark Archipelago).

Taheitia bismarckiana *Rensch*

Truncatella avenacea bismarckiana Rensch 1937, Archiv für Naturgeschichte N. F. **6**, p. 627 (Neu-Lauenburg, Bismarck Archipelago).

Taheitia ultima *Rensch*

Truncatella ultima Rensch 1937, Archiv für Naturgeschichte N. F. **6**, pt. 4, p. 629, fig. 53 (Neu-Pommern Id., Bismarck Archipelago).

Taheitia gracilenta *Smith*

Truncatella gracilenta Smith 1897, Proc. Malacological Soc. London **2**, p. 289, pl. 17, fig. 16–17 (Andai, New Guinea).

Taheitia wallacei *H. Adams*

Truncatella (*Taheitia*) *wallacei* H. Adams 1865, Proc. Zool. Soc. London, p. 416, pl. 21, fig. 13–14 (Waigiou, New Guinea).

Taheitia tessellata *Quadras and v. Mollendorff*

Taheitia tessellata 'Boettger' Quadras and v. Möllendorff 1897, Nachrichsblatt Malakozoologischen Gesellschaft **29,** p. 32 (Bismarck Archipelago).

Taheitia alata *Quadras and v. Mollendorff*

Truncatella (*Taheitia*) *alata* Quadras and v. Möllendorff 1894, Nachrichtsblatt Malakozoologischen Gesellschaft **26,** p. 41 (Mariana Islands).

Taheitia lamellicosta *Quadras and v. Mollendorff*

Truncatella (*Taheitia*) *lamellicosta* Quadras and v. Möllendorff 1894, Nachrichtsblatt Malakozoologischen Gesellschaft **26,** p. 41 (Mariana Islands).

Taheitia parvula *Quadras and v. Mollendorff*

Truncatella (*Taheitia*) *parvula* Quadras and v. Möllendorff 1894, Nachrichtsblatt Malakozoologischen Gesellschaft **26,** p. 41 (Mariana Islands).

Taheitia mariannarum *Quadras and v. Mollendorff*

Truncatellum mariannarum Quadras and v. Möllendorff 1894, Nachrichtsblatt Malakozoologischen Gesellschaft **26,** p. 39 ([Guam] Mariana Islands).
Truncatella subauriculata Quadras and v. Möllendorff 1894, Nachrichtsblatt Malakozoologischen Gesellschaft **26,** p. 40 ([Guam] Mariana Islands).

We have examined cotypes of both of these forms and cannot distinguish between them.

Taheitia albida *v. Mollendorff*

Truncatella (*Taheitia*) *albida* v. Möllendorff 1893, Bericht der Senckenbergischen Naturforschenden Gesellschaft in Frankfurt p. 137, pl. 5, fig. 11a–b (Saob, Leyte Id., Philippine Islands).

Taheitia anctostoma *Quadras and v. Mollendorff*

Taheitia anctostoma Quadras and v. Möllendorff 1897, Nachrichtsblatt Malakozoologischen Gesellschaft **29,** p. 31 (Puerto Princesa Id., Paragua [Palawan, Philippine Islands]).

Catalogue of the Truncatellidae

The following catalogue includes all names that we could locate which referred to species and genera in the Truncatellidae. Cross references are given to many synonyms in the genus *Truncatella;* they are omitted for species in *Geomelania* and *Taheitia* as these genera are outlined fully in the earlier portion of this report.

We have used the following abbreviations in order to save as much space as possible in the catalogue.

Archiv f. Natur. — Archiv für Naturgeschichte

C to C — Contributions to Conchology

This publication consisted of twelve numbers under the editorship of C. B. Adams. It contained original articles by Adams, Bland and Chitty, as well as the republication of certain papers by Adams that had appeared elsewhere. It was published in New York between October 1849 and November 1852. After the death of C.B.Adams, Edward Chitty published under the same title in Kingston, Jamaica (1853) a continuation which he called No. 1. This we have indicated in our catalogue as no. 1 [13] to avoid confusion. No additional numbers were ever published.

Jahr. Malak. Ges. — Jahrbücher Malakozoologischen Gesellschaft

J de C — Journal de Conchyliologie

Malak. Blatt. — Malakozoologische Blätter

MCZ — Museum of Comparative Zoölogy

Nach. Malak. Ges. — Nachrichtsblatt Malakozoologischen Gesellschaft

PZS — Proceedings of the Zoological Society of London

USNM — United States National Museum

Zeit. f. Malak. — Zeitschrift für Malakozoologie

T. — stands for **Truncatella:** all other genera are written out in full

abbotti Clench and Turner **Taheitia arcasiana:** 1948 (9 miles south of Lautoka, N. W. Viti Levu, Fiji Islands). This paper, p. 187.

Acme Hartmann: 1821, System der Erd-und Suesswasser Gastropoden Europa's [in] Sturm's Deutschlands Fauna Abth. 6, Heft 5, pp. 31, 37; is a synonym of *Acmea* Hartmann 1821; Pilsbry 1926, p. 32.

Acmea Hartmann: 1821, System der Erd-und Suesswasser Gastropoden Europa's [in] Sturm's Deutschlands Fauna Abth. 6, Heft 5, pp. 48–49, pl. 1, fig. 4.

Published previous to Neue Alpina. Is in the family Acmidae and not Truncatellidae; Pilsbry 1926, p. 32; Thiele 1929, p. 136.

Acmea Hartmann: 1821, Neue Alpina **1,** pp. 204–212.

This name was used for a Truncatella but was published later than Hartmann's earlier use of the same name, a name not referring to any species that can be called a *Truncatella* (see above); see also Clench and Turner 1948, *Johnsonia* **2,** p. 151–152 for full discussion of this problem.

acutecostata Mousson **T.:** 1869, J de C **17,** pl. 5, fig. 4 (Iles Paumotou [Tuamotu]); error on plate caption for *arctecostata* Mousson.

acutinodosa '?' Paetel **Geomelania:** 1889, Catalog der Conchylien-Sammlung **2,** p. 431 (Jamaica); nude name.

adamsi Pfeiffer **T.:** 1846 Zeit. f. Malak. **3,** p. 119 and p. 189; new name for *T. scalariformis* C. B. Adams, non Reeve.

affinis C. B. Adams **Geomelania:** 1850, C to C no. 6, p. 96 (Jamaica). Lectotype MCZ 177212.

Under the listing of this species in this report (p. 175) *G. affinis* should have followed *G. minor* C. B. Adams.

alata 'C. B. Adams' Paetel **Geomelania:** 1889, Catalog der Conchylien-Sammlung **2,** p. 431 (Jamaica). Nude name; is *Geomelania jamaicensis* Pfeiffer; Clench and Turner, this paper, p. 174. Lectotype MCZ 175607.

alata Quadras and v. Möllendorff **T. (Taheitia):** 1894, Nach. Malak. Ges. **26,** p. 41 (Mariana Islands). Cotypes MCZ 21470.

alba Coen **T. subcylindrica** var.: 1933, R. Comitato Talassografico Italiano, Venice, Memoria 192, p. 30, 159 (Adriatic).

Albertisia Issel, Ann. del Museo Civico di Storia Nat. di Genova **15,** p. 275; genotype, *A. punica* Issel, monotypic. Is a synonym of *Truncatella,* Thiele 1929, p. 151.

albida v. Möllendorff **T. (Taheitia):** 1893, Bericht der Senckenbergischen Naturforschenden Gesellschaft in Frankfurt p. 137, pl. 5, fig. 11a–b (Saob, Leyte, Philippine Islands).

alemon Pilsbry **Geomelania:** 1942, Nautilus **56**, p. 3, pl. 1, fig. 9 (Boilers, near Georgetown, Grand Cayman, Cayman Islands).

alternans Mousson **T.:** 1869, [in] Museum Godeffroy, Hamburg, Catalog 4, p. 76 (Vuni Vatu, Central Viti Levu, Fiji Islands); nude name; Mousson 1874, Museum Godeffroy, Hamburg, Catalog 5, p. 104. This paper, p. 186.

amnis 'C. B. Adams' Vendryes **Geomelania:** 1899, Journal Institute of Jamaica **2**, pt. 6, p. 605 (Jamaica); nude name.

This is probably a typographical error for *affinis* Adams as this latter name does not appear in Vendryes' list.

anctostoma Quadras and v. Möllendorff **Taheitia:** 1897, Nach. Malak. Ges. **29**, p. 31 (Puerto Princesa Id., Paragua [Palawan, Philippine Islands]).

antideluviana Deshayes **T.:** 1881, Description des Animaux sans Vertèbres découverts dans le bassin de Paris, pour servir ce supplément à la Description des Coquilles fossiles, etc. **2**, p. 421, pl. 18, fig. 24–27 (Calcaiae grossière, Hondan and Grignon, Paris Basin, France, fossil).

arcasiana Crosse **T.:** 1868, J de C **16**, p. 177 (Viti [Fiji] Islands); *non arcasiana* 'Crosse' Mousson 1870, J de C **18**, p. 196, pl. 7, fig. 15. This paper, p. 185.

arctecostata Mousson **T.:** 1869, J de C **17**, p. 68, pl. 5, fig. 4. (Ile Paumotou [Tuamotu]). Is *scalariformis* Reeve; Mousson 1874, p. 104.

atomus Philippi **T.:** 1841, Archiv f. Natur. (7) **1**, p. 54, pl. 5, fig. 4. Is in the genus *Homalogyra;* Jeffreys 1867, p. 69.

atomus 'Shuttleworth' Pilsbry **T.:** 1920, Manual of Conchology (2) **26**, p. 63. Error for *Truncatellina atomus* Shuttleworth.

aurantia Gould **T.:** 1847 [1848], Proc. Boston Soc. Nat. Hist. **2**, p. 208; Gould 1852, United States Exploring Expedition **12**, p. 110, fig. 125a–b (Mangsi Id., Borneo). Is *guerinii* Villa; Clench and Turner, this paper, p. 167.

aurea Prime **T.:** 1853, List of Shells and Corals collected at Bermuda by Temple Prince [sic] L.L.B. of New York. [In] The Bermuda Pocket Almanac for 1852, p. 55; nude name.

avenacea Garrett **T.:** 1887, PZS, p. 301 (Vanua Levu [Fiji Islands]). This paper, p. 167.

bahamensis Clench and Turner **T. bilabiata:** 1948, *Johnsonia* **2**, p. 155, pl. 67, fig. 1–5 (Northwest Point, Little Inagua Id., Bahama Islands). Holotype MCZ 158794.

bairdiana C. B. Adams **T.:** 1852, Ann. Lyceum Nat. Hist. New York **5**, pp. 437, 543 [p. 213 in separate] (Panama). Lectotype MCZ 177110.

barbadensis Pfeiffer **T.:** 1856 [1857], PZS **24**, p. 337 (Island of Barbados, West Indies). Is *bilabiata* Pfeiffer; Clench and Turner 1948, *Johnsonia*, p. 153. Heautotype MCZ 136008.

beardsleana C. B. Adams **Cylindrella:** 1849, C to C no. 2, p. 19 (Jamaica). Is a *Geomelania.* Lectotype MCZ 177224.

bezanconi Cossmann **T.:** 1892, J de C **40**, p. 358, pl. 9, fig. 6. (d'Etampes, France). Oligocene; probably not a *Truncatella.*

bilabiata Pfeiffer **T.:** 1840 Archiv f. Natur. (6) **1**, p. 253 (Cuba).

bismarckiana Rensch **T. avenacea:** 1937, Archiv f. Natur. N.F. 6, pt. 4, p. 627 (Neu Lauenburg, New Mecklenberg Id., Bismark Archipelago). Is a *Taheitia.*

Blandiella Guppy: 1871, American Journal of Conchology **6,** p. 309; genotype, *Blandiella reclusa* Guppy, monotypic. This paper, p. 183.

brazieri Cox **T.:** 1868, Monograph of Australian Land Shells, Sydney, p. 93, pl. 15, fig. 12a–b (Miller's Point, Sydney, New South Wales, Australia).

californica Pfeiffer **T.:** 1857, PZS p. 111 (San Diego, California).

campanella 'Philippi' Paetel **T.:** 1889, Catalog der Conchylien-Sammlung **2,** p. 432; nude name.

capensis 'Krauss' Küster **T.:** 1855, Conchylien-Cabinet (1) **1,** pt. 23, p. 13. Nude name, in the synonymy of *T. ventricosa* 'Sowerby' Reeve.

capillacea 'Gundlach' Pfeiffer **T.:** 1859, Malak. Blatt. **6,** p. 77 (Caimanera, Cuba). Cotypes MCZ 178982.

caribaeensis 'Reeve' Pilsbry **T. pulchella** form: 1948, Land Mollusca of North America, Philadelphia **2,** pt. 2, p. 1071, fig. 572a (Key Largo, Florida).

This large and strongly ribbed form is unquestionably *T. succinea* C. B. Adams. It is extremely unfortunate that the neotypes selected (ANSP 59131, from Grand Bay, Guadeloupe Island) were not figured but refer to figures based on specimens from Key Largo, Florida.

caribaeensis 'Sowerby' Reeve **T.:** 1842, Conchologia Systematica **2,** p. 94, pl. 182, fig. 2 (no locality given). Is *pulchella* Pfeiffer; Clench and Turner 1948, *Johnsonia,* p. 156.

caribaeus 'Sowerby' Petit **T.:** 1856, J de C **5,** p. 152 (Guadeloupe) [error for *caribaeensis* 'Sowerby' Reeve].

carribeorum 'Sowerby' Gould **T.:** 1852, United States Exploring Expedition **12,** p. 110 [error for *T. caribaeensis* 'Sowerby' Reeve].

ceilanica 'Pfeiffer' v. Martens **T.:** 1880, [in] K. Möbius, Beitrage z. Meeresfauna der Insel Mauritius und der Seychellen, Berlin p. 207 [error for *ceylanica* Pfeiffer].

cerca - - - - T.: 1902 [1903], PZS Index for the years 1881–1890, p. 470 [error for *cerea* Gassies].

cerea Gassies **T.:** 1878, J de C **26,** p. 339 (Ilot Koutoumo, Ile de Pins, New Caledonia). Is *T. ceylanica* Pfeiffer; Garrett 1887, p. 300.

ceylanica Pfeiffer **T.:** 1856 [1857], PZS **24,** p. 336 (Ceylon).

Chittia 'Livesay' H. and A. Adams: 1858, The Genera of Recent Mollusca **2,** p. 647; genotype, *Geomelania sinuosa* Chitty, monotypic. This paper, p. 178.

Chittya 'Livesay' Pfeiffer: 1865, Monographia Pneumonopomorum Viventium **3,** p. 2; emendation for *Chittia* 'Livesay' H. and A. Adams.

Choristoma J. de Christophori and Jan: 1832, Cat. Mus. (Mantissa Test.) p. 8: *non* Hartmann 1840. We have not seen this publication. Is *Truncatella* Risso; Jeffreys 1867, p. 84.

clathrata A. Adams and G. F. Angas **T. (Taheitia):** 1865, PZS p. 54, pl. 2, fig. 2 (Solomon Islands).

clathrus Lowe **T.:** 1832, Zoological Journal **5,** p. 303 (locality unknown); Reeve 1842, Conchologia Systematica **2,** pl. 182, fig. 3. Is *T. scalaris* Michaud, Clench and Turner, 1948, *Johnsonia,* p. 160; Pilsbry 1948, Land Shells of North America, Philadelphia **2,** pt. 2, p. 1069.

Unfortunately Pilsbry has given the date of *clathrus* Lowe as 1830. According to Sherborn this part of the Zoological Journal appeared in July 1832, two years after Michaud had introduced the name *scalaris* for this species.

concinna Pease **T.:** 1871, PZS p. 468 (Apaiang, Kingsmill Ids.). Is *T. guerinii* Villa; Clench and Turner. This paper, p. 167. Cotypes MCZ 178650.

concinnum 'Scacchi' Philippi **Cyclostoma:** 1844, Enumeratio Molluscorum Sicilia **2,** p. 133 (Sicily). Is *T. truncatula* Draparnaud; Jeffreys 1867, p. 87.

conica C. B. Adams **Geomelania:** 1850, C to C no. 6, p. 97 (Jamaica). Lectotype MCZ 177205.

conspicua 'Bronn' Pfeiffer **T.:** 1856, Monographia Auriculaceorum Viventium **1,** p. 184 (Fiji and Baclayon Id., Philippines). Is *T. guerinii* Villa.

This name was admitted by Pfeiffer based upon a name that appeared in a sales catalogue by Bronn.

cookei Clench and Turner **Taheitia arcasiana:** 1948, (Vuni Vatu, central Viti Levu, Fiji Islands). Holotype MCZ 181049. This paper, p. 186.

corsulata 'Risso' d'Orbigny **T.:** 1842, Histoire Physique, Politique et Naturelle de L'Ile de Cuba, Paris **2,** p. 5 [error for *costulata* Risso].

costata 'Benoist' Cossmann **T.:** 1894 [1895] Association Française pour l' avancement des Sciences 23rd Session pt. 2, p. 446, pl. 3, fig. 10–11 (fossil, Mérignac, near Bordeaux, France).

This appears to us to be a synonym of *T. truncatula* Draparnaud.

costata Pfeiffer **T.:** 1839, Archiv f. Natur. von Wiegmann, 5th year **1,** p. 356 (Cuba).

costellaris (?) 'Risso' C. B. Adams **T.:** 1850, C to C p. 52 (Fiji Islands); nude name, probably error for *T. costulata* Risso.

costellifera Pease **T.:** 1871, PZS p. 468 (Vavau Id. [Tonga Ids.]). Is *T. rustica* Mousson; Garrett 1887, p. 300.

costulata Risso **T.:** 1826, Histoire Naturelle L'Europe Méridionale **4,** p. 125, pl. 4, fig. 57 (Central Europe). Is *T. truncatula* Draparnaud; Pfeiffer 1856, p. 189.

costulosa C. B. Adams **Geomelania:** 1850, C to C no. 6, p. 96 (Jamaica).

crassicostata 'Sowerby' H. and A. Adams **T.:** 1858, Genera of Recent Mollusca, London **2,** p. 311. Nude name.

cristata Crosse **T.:** 1868, J de C **16,** p. 177 (locality unknown); Crosse 1871, J de C **19,** p. 66, pl. 3, fig. 11 (Tonga Islands). Is *T. guerinii* Villa; Clench and Turner. This paper, p. 167.

cumingi Dean **Geomelania:** 1933, Journal of Conchology **19,** p. 331, fig. 5–6. New name for *Geomelania jamaicensis* 'Pfeiffer' C. B. Adams, *non Geomelania jamaicensis* Pfeiffer. Holotype MCZ 172231.

cumingiana 'Adams' Gould **T.:** 1852, United States Exploring Expedition **12,** p. 112; [error for *T. cumingii* C. B. Adams].

cumingii C. B. Adams **T.:** 1845, Proc. Boston Soc. Nat. Hist. **2,** p. 12 (Jamaica). Lectotype MCZ 177155.

cylindracea 'Pease' Nevill **T.:** 1878, Hand List of Mollusca in the Indian Museum **1,** p. 253 (Pacific Islands); nude name. Cotypes MCZ 161490.

Pease sent out duplicates under the manuscript name of *cylindracea* Pease, a name which Nevill listed. There are specimens in the collection of the Museum of Comparative Zoölogy from Pease in his own handwriting under this name.

cylindrata Briart and Cornet **T.:** 1889, Mémoires de l'Acad. Royale de Sciences, des Lettres et des Beaux Arts de Belgique **47,** p. 20, pl. 19, fig. 12a–c (fossil, Mons, France).

cylindrica 'Pease' Cuming and H. Adams **T.:** 1864 [1865], PZS p. 676; nude name. Is *Taheitia pallida* Pease. Cotypes MCZ 181051. This paper, p. 185.

Cuming and Adam were in error in assigning this species to "*Taheitia*" *scalaris* Michaud. It is not in any way related to this Western Atlantic species. It was later named *Truncatella pallida* by Pease, and is now in the genus *Taheitia* and not *Truncatella.*

debilis Mousson **T.:** 1873, Malak. Blatt. **21,** p. 156; Mousson 1874, Jahrbücher Malak. Ges. **1,** p. 99, pl. 5, fig. 3 (Rabat, West Morocco). Is *T. bilabiata* Pfeiffer; Clench and Turner 1948, *Johnsonia,* p. 153.

densecostata H. B. Baker **Geomelania minor** subsp.: 1935, Nautilus **48,** p. 83, pl. 3, fig. 5 (W. of Marshall Pen and E. of Mandeville-Somerset River, Jamaica). Holotype ANSP 163726; Paratypes MCZ 100892. Is a synonym of *G. minor* C. B. Adams; Clench and Turner this paper, p. 174.

desnoyersi Payraudeau **Paludina:** 1826, Catalogue des Annelides et des Mollusques de l'Ile de Corse, p. 116, pl. 5, fig. 21–22 (Gulf of Santa-Manza, Porto-Vecchio, de Saint-Florent, de Calvi et des étamps d'Orbino). Is *T. truncatula* Draparnaud; Pfeiffer 1856, p. 188.

diaphana Gassies **T.:** 1869, J de C **17,** p. 78 (Isle d'Art, New Caledonia).

distensa Cossmann **T.:** 1888, Annales de la Société Royale Malacologique de Belgique **23,** p. 199, pl. 8, fig. 1–2 (Chenay, France—fossil, Eocene).

dubiosa C. B. Adams **T. ?:** 1852, Ann. Lyceum Nat. Hist. New York **5,** p. 437 [p. 213 separate] (Panama). Is in the genus *Aroapyrgus* H. B. Baker.

dubiosa 'Fischer' Paetel **Geomelania:** 1889, Catalog der Conchylien-Sammlung **2,** p. 431 (Guadeloupe). Nude name.

We have been unable to trace this name other than its listing in Paetel. In Beau's list, 1857 [1858] p. 16 *Truncatella dubiosa* C. B. Adams is given as occurring in Guadeloupe, which see.

elegans C. B. Adams **Geomelania:** 1849, C to C no. 2, p. 18 (Jamaica). Lectotype MCZ 177222. This paper, p. 180.

elongata 'Poey' Pfeiffer **T.:** 1856, Monographia Auriculaceorum Viventium **1,** p. 193 (Oriente, Cuba); Poey 1858, Memorias Sobre la Historia Natural de la Isla de Cuba **2,** pp. 25, 89 (Jibara [Gibara], Holguín, Cuba).

Erpetometra Lowe: 1832, Zoological Journal **5,** p. 300; genotype, *Cyclostoma truncatulum* Draparnaud, monotypic. Is a synonym of *Truncatella* Risso.

exilis C. B. Adams **Geomelania:** 1950, C to C no. 6, p. 97 (Jamaica).

exilis Menke **T.:** 1830, Synopsis Methodica Molluscorum, Pyrmont, p. 44 (no locality given). Is *Paludina desnoyersi* Payraudeau.

expansa C. B. Adams **Geomelania:** 1849, C to C no. 2, p. 18 (Jamaica). Is *Geomelania jamaicensis* Pfeiffer; Clench and Turner. This paper, p. 174. Lectotype MCZ 177209.

expansilabris Quadras and v. Möllendorff **T.:** 1894, Nach. Malak. Ges. **26,** p. 40 (Mariana Islands).

fasciata Tapparone Canefri **T.:** 1886, Annali del Museo Civico Storia Naturale, Genova **24,** p. 193, pl. 2, fig. 24 (Wokan Island [Wokam] Aru Islands). Is *T. guerinii* Villa; Clench and Turner. This paper, p. 167.

ferruginea Cox **T.:** 1869, Monograph of Australian Land Shells, Sydney, p. 94 (Cape York [Queensland] Australia). Is *T. guerinii* Villa; Clench and Turner, this paper, p. 167.

Fidelis Risso: 1826, Histoire Naturelle l'Europe Méridionale **4,** p. 121; genotype, *F. theresa* Risso, monotypic.

filicosta 'Gundlach' Poey **T.:** 1858, Memorias Sobre la Historia Natural de la Isla de Cuba **2,** p. 90 (Caimanera, Guantánamo, Cuba). Cotypes MCZ 175605.

filosa J. de C. Sowerby **T.:** 1838, [in] T. L. Mitchell, Three Expeditions into the Interior of Eastern Australia **2,** p. 190, footnote. (Mitre Lake, Australia); nude name.

fortis C. B. Adams **Geomelania:** 1850, C to C no. 6, p. 94 (Jamaica). Lectotype MCZ 177214.

funiculus Mousson **T.:** 1869, [in] Museum Godeffroy, Hamburg, Catalog 4, p. 76 (Intérieur de Viti Levu); nude name; Mousson 1870, J de C **18,** p. 197. Is a *Taheitia.* This paper, p. 189.

fusca Philippi **T.:** 1841, Archiv f. Natur. (7) **1,** p. 53, pl. 5, fig. 5 (Palermo [Sicily]). Is a *Paludinella*; Pfeiffer 1856, p. 178.

futunaensis Mousson **T.:** 1869, [in] Museum Godeffroy, Hamburg, Catalog 4, p. 76; nude name; Mousson 1871, J de C **19,** p. 30 (Futuna [(also Fotu-

na) Horne Island]). Is *T. rustica* Mousson; Clench and Turner. This paper, p. 164.

Geomelania: Pfeiffer: 1845, PZS **13,** p. 45; genotype *Geomelania jamaicensis* Pfeiffer, monotypic. This paper, p. 172.

glabra Risso **T.:** 1826, Histoire Naturelle l'Europe Méridionale **4,** p. 434, pl. 4, fig. 53 [plate caption = *T. laevigata* Risso]. Is *T. truncatula* Draparnaud; Pfeiffer 1856, p. 189.

Glaucothoe Leach: 1852, Synopsis of the Mollusca of Great Britain, London, p. 199; genotype, *Glaucothoë montaguana* Leach, monotypic. Is *Truncatella* Risso; Jeffreys 1867, p. 84.

gouldii 'Bronn' Pfeiffer **T.:** 1856, Monographia Auriculaceorum Viventium **1,** p. 185.

This was a nude name given in a price list of Bronn and included by Pfeiffer as a synonym of *caribaeensis.*

gouldii 'C. B. Adams' Pfeiffer **T.:** 1846, Zeit. f. Malak. **3,** p. 183. Nude name as a synonym of *caribaeensis* Reeve.

gracilenta 'Gould' Binney **T.:** 1858, Proc. Acad. Nat. Sci. Philadelphia **10,** [errata, no pagination]; nude name. Is *T. californica* Pfeiffer, Binney 1859, p. 29; Pilsbry 1948, Land Mollusca of North America, Philadelphia **2,** pt. 2, p. 1073.

gracilenta Smith **T.:** 1897, Proc. Malacological Soc. London **2,** p. 289, pl. 17, fig. 16–17 (Andai, New Guinea). Is a *Taheitia.*

gracilis C. B. Adams **Geomelania:** 1850, C to C no. 6, p. 95 (Jamaica). Lectotype MCZ 177223.

granum Garrett **T.:** 1872, American Journal Conchology **7,** p. 225 (Viti Islands, N. E. end of Taviuni Island). Lectotype MCZ 178652; Paratypes Bishop Museum 2476. This paper, p. 165.

greyana C. B. Adams **Cylindrella:** 1850, C to C no. 5, p. 82 (Jamaica). Is a *Geomelania.* Lectotype MCZ 177215.

guadalupensis Pilsbry **T. stimpsoni:** 1901, Nautilus **15,** p. 83 (Guadalupe Island [West Mexico]).

guerinii A. and J. B. Villa **T.:** 1841, Conchyliarum Terrestrium et Fluviatilum, Mediolani [Milan, Italy] p. 59 (Bourbon [Réunion Id.]). Lectotypes MCZ 177264. This paper, p. 167.

guerinii 'Parreyss' Pfeiffer **T.:** 1856, Monographia Auriculaceorum Viventium **1,** p. 185. Nude name included in the synonymy of *caribaeensis.*

haitensis Weinland **T. (Blandiella):** 1876, Malak. Blatt. **23,** p. 172; Pfeiffer 1876, Malak. Blatt. **23,** p. 233, pl. 2, fig. 12–14 (Mts. near Jérémie, Haiti). Cotype MCZ 90391. This paper, p. 182.

hammerschmidti 'Charpentier' Küster **T. truncatula:** 1855, Conchylien-Cabinet (2) **1,** pt. 23, p. 11, pl. 2, fig. 16–18 (Venedig [Venice]).

Probably a synonym of *T. subcylindrica* Linné.

hammersmithii 'Charpentier' Coen **T.:** 1933, R. Commitato Talassografico Italiano, Venice, Memoria 192, pp. 30, 159 [error for *hammerschmidti* 'Charpentier' Kuster].

hermitei Barden **T.:** 1879, Actes de la Soc. Linnéenne de Bordeaux **33,** Comptes-Rendus p. 17 (Genneteil [France] fossil).
Herpetometra 'Lowe' Gray: 1856, PZS p. 22 [error for *Erpetometra* Lowe.]

hilliana C. B. Adams **Geomelania:** 1851, C to C no. 9, p. 159 (Jamaica). Unique type specimen in the Chitty collection, British Museum.
hiusuensis 'Pilsbry' Sykes **T.:** 1901, Zoological Record—Mollusca—**38,** p. 91; [error for *kiusiuensis* Pilsbry].
hyalina 'Desmar' Pfeiffer **Rissoa:** 1856, Monographia Auriculaceorum Viventium **1,** p. 190. Is *T. truncatula* Draparnaud.
improvisa Monterosato **T. truncatula** var.: 1919, Bollettino della Societa Zoologica Italiana (3) **3,** p. 13 (Tripoli, Mediterranean).
inornata Chitty **Geomelania:** 1853, C to C no. 1 [13], p. 5 (Jamaica).

insularis Clench and Turner **T. thaanumi:** 1948 (near Houma, Tongatabu, Tonga Islands). Holotype, B. P. Bishop Museum 87796. This paper, p. 166.
integra Coen **T. subcylindrica:** 1933, R. Comitato Talassografico Italiano, Venice, Memoria 192, pp. 30, 159 (Adriatic).
jamaicensis Pfeiffer **Geomelania:** 1845, PZS **13,** p. 45; Pfeiffer 1846, Conchylien-Cabinet (2) **1,** pt. 19, p. 214, pl. 30, fig. 19–20 (Jamaica, "Savanah la mar").
jamaicensis 'Pfeiffer' C. B. Adams **Geomelania:** 1849, C to C no. 2, p. 18 (Jamaica); *non jamaicensis* Pfeiffer; is *Geomelania cumingi* Dean 1933, p. 331.
jamaicensis 'Pfeiffer' Petit **Geomelania:** 1851, J de C **2,** p. 81, pl. 2, fig. 4 (Jamaica); *non jamaicensis* Pfeiffer; is *Geomelania affinis* C. B. Adams; Sykes 1905, p. 226.
japonica Pilsbry and Hirase **T.:** 1905, Proc. Acad. Nat. Science, Philadelphia **57,** p. 707 (Futami Island, Japan). Is *T. marginata* Küster. This paper, p. 163. Types, ANSP 89942.
jarvisi E. R. Sykes **Geomelania:** 1905, Proc. Malac. Soc. London **6,** p. 226, fig. 1 (near Albert Town, Trelawny, Jamaica).
juliae deFolin **T.:** 1872, Les Fonds de la Mer **2,** liv. 4, p. 49, pl. 2, fig. 4 (Bidassoa, Hendaye, Dept. Basses Pyrenees, France). Is *Odostomia indistincta* Montagu; Jeffreys 1884, p. 354.
kiusiuensis Pilsbry **T.:** 1902, Proc. Acad. Nat. Science, Philadelphia **53,** p. 615 (Tane-ga-shima, Hirado, Hizen, Japan). Paratypes MCZ 134427. This paper, p. 165.
labiosa Souverbie **T.:** 1862, J de C **10,** p. 242, pl. 9, fig. 9 (Island of Art [New Caledonia]). Is *T. teres* Pfeiffer. This paper, p. 164. Cotypes MCZ 178633.
laddi Clench and Turner **Taheitia turricula:** 1948 (Yangasa Levu, Lau Group, Fiji Islands). Holotype, B. P. Bishop Museum 167165, Paratype MCZ 157850. This paper, p. 189.
laevigata Risso **T.:** 1826, Histoire Naturelle l'Europe Méridionale **4,** p. 125, pl. 4, fig. 53 (Central Europe). Is *T. truncatula* Draparnaud; Pfeiffer 1856, p. 189.

lamellicosta Quadras and v. Möllendorff **T. (Taheitia):** 1894, Nach. Malak. Ges. **26,** p. 41 (Mariana Islands).

lineata Held **T.:** 1848, Wassermoll. Bayerns Jahresh. Landwirth Gewerbe Schule Muenchen p. 22.

We have not seen this paper. It is *Acicula lineata* Draparnaud according to Pfeiffer 1852, p. 5.

lirata Poey **T.:** 1858, Memorias Sobre la Historia Natural de la Isla de Cuba **2,** pp. 25, 89 (Jibara [Gibara] near Holguín, Cuba). Cotypes MCZ 181277; 158267.

littorea 'della Chiaje' Clark **T.:** 1855, British Marine Testaceous Mollusca p. 383. Error for *littorina* della Chiaje.

littorina della Chiaje **Helix:** 1828, Mem. sulla Storia e Notomia Degli Animali senza Vertebre del Regno di Napoli **3,** p. 225, pl. 49, fig. 36–38 (Naples [Italy]). Is a *Paludinella.*

loevigata 'Risso' Coen **T.:** 1933; R. Comitato Talassografico Italiano, Venice, Memoria 192, p. 159; [error for *laevigata* Risso].

lowei Shuttleworth **T.:** 1852, Mittheilungen der Naturforschenden Gesellschaft in Bern. no. 241–242, p. 146 (Teneriffae Id.).

This species was based on Lowe's *Truncatella truncatula* var. B 1832, Zoological Journal **5,** p. 302, pl. 13, fig. 13–18. We consider this species to be *truncatula* Draparnaud.

lubrica Held **T.:** 1848, Wassermoll Bayerns. Jahresh. Landwirth Gewerbe Schule Muenchen p. 22.

We have not seen this paper. Is *Acicula* [*Acme*] *polita* Hartmann, according to Pfeiffer 1852, p. 5.

magna C. B. Adams **Geomelania:** 1850, C to C no. 6, p. 94 (Jamaica). Lectotype MCZ 177200.

marginata Küster **T.:** 1855, Conchylien-Cabinet (2) **1,** pt. 23, p. 12, pl. 2, fig. 24–26 (Labuan, Borneo). This paper, p. 163.

mariannarum Quadras and v. Möllendorff **T.:** 1894, Nach. Malak. Ges. **26,** p. 39 (Mariana Ids.). Cotypes USNM 302935; MCZ 183768.

media C. B. Adams **Geomelania:** 1850, C to C no. 6, p. 96 (Jamaica). Lectotype MCZ 177213.

Merrilliana: Clench and Turner: 1948, subgenotype. *Geomelania elegans* C.B. Adams, original designation. This paper, p. 179.

micra Tennison-Woods **T.:** 1878, Trans. and Proc. Royal Soc. of Victoria **14,** p. 62 (Brighton, Victoria, Australia).

microlena 'Bourguignat' de Monterosato **T.:** 1878, J de C **26,** p. 321 (Algerie [Algeria]).

This is regarded by de Monterosato as only a small form of *T. laevigata* Risso.

minor C. B. Adams **Geomelania:** 1849, C to C no. 2, p. 18 (Jamaica). Lectotype MCZ 177207; *non minor* Pfeiffer.

minor Pfeiffer **Geomelania:** 1850, Conchylien-Cabinet (2) **1**, pt. 19, p. 214, pl. 30, fig. 21–22 (Jamaica); *non minor* C. B. Adams.

minor Briart and Cornet **T.:** 1889, Memorias de l'Acad. Royale des Sciences des Lettres et de Beaux Arts de Belgique **47**, p. 21, pl. 19, fig. 13a–c (Mons, France, fossil).

minor Nevill **T. valida** var.: 1878, Hand List of the Mollusca in the Indian Museum Part 1, p. 254; nude name.

minor 'Issel' Neville **T. guerinii** var.: 1878, Hand List of the Mollusca in the Indian Museum Part 1, p. 253; nude name.

minuscula deFolin **T.:** 1875, Les Fonds de la Mer **2**, p. 145, pl. 3, fig. 3.

We have not seen this paper; probably not a *Truncatella.*

minuta Requien **T.:** 1848, Catalogue des Coquilles de L'Ile de Corse p. 57 (Ajaccio, Corsica).

minutissima 'Parreyss' Paetel **T.:** 1889, Catalog der Conchylien-Sammlung **2**, p. 433; nude name.

modesta C. B. Adams **T.:** 1850, C to C no. 8, p. 132; 1851, Ann. Lyc. Nat. Hist. New York **5**, p. 48 (Jamaica). Holotype MCZ 177159.

montaguana Leach **Glaucothoe:** 1852, Synopsis of the Mollusca of Great Britain, London, p. 199 (Coasts of Devon and Cornwall).

Is a substitute name for *subtruncatus* Montagu.

montagui Lowe **T.:** 1835, Zoological Journal **5**, p. 303 (Seas of Britain). Is *subcylindrica* Linné.

moussoni O. Semper **Tahitia** [sic]: 1874, [in] Museum Godeffroy, Hamburg, Catalog 5, p. 102 (Maupiti Island); nude name.

nitida 'Gassies' Garrett **T.:** 1887, PZS p. 300; nude name. Is *ceylanica* Pfeiffer. Cotypes MCZ 174074.

nitidissima McGillivray **Eulima:** 1843, A History of Molluscous Animals of Aberdeen, Kincardine and Banff, London, p. 142 (Bay of Cruden, Aberdeen, Scotland); *non Turbo nitidissima* Montagu 1803. Is *T. truncatula* Draparnaud; Jeffreys 1867, p. 87.

nitidus J. Adams **Turbo:** 1797, Trans. Linnean Soc. London **3**, p. 65 (Pembrokshire, England).

We consider this to be *T. subcylindrica* Linné.

obesa Menke **T.:** 1830, Synopsis Methodica Molluscorum, Pyrmont, p. 43 (no locality given); nude name.

According to Menke it is the same as *Rissoa truncata* Hartmann which is *Truncatella truncatula* Draparnaud.

obesa Menke **T.:** 1830, Synopsis Methodica Molluscorum, Pyrmont, p. 137 (Havannam [Habana] Cuba); *non* Menke 1830, p. 43.

This species is completely unknown to us. It is probably not a *Truncatella* but some Rissoid.

obscura Morelet **T.:** 1882, J de C **29,** p. 239, pl. 10, fig. 12 (Ilot de Dzaoudzi [Pamanzi Id., Mayotta, Comoro Island]).

opaca Monterosato **T.:** 1878, Enumerazione e Sinonimia delle conchiglie mediterranee, Palermo, p. 27. We have not seen this paper. Cotypes MCZ 158233.

pacifica Pease **T.:** 1867, American Journal of Conchology **3,** p. 230, pl. 15, fig. 27 (Insula Oualan [Ovalau, Fiji Ids.]). Is *T. guerinii* Villa. Cotypes MCZ 59799.

pallida Pease **Taheitea:** 1867, American Journal of Conchology **3,** p. 229 (Tahiti and Huaheine). Cotypes MCZ 178657; 178660.

parcicostata Nevill **T. valida** var.: 1878, Hand List of the Mollusca in the Indian Museum Part 1, p. 254; nude name.

parisiensis Deshayes **T.:** 1861, Description des Animaux sans Vertèbres découverts dans le bassin de Paris pour servir de supplemént à la Description des Coquilles fossiles etc. **2,** p. 422, pl. 18, fig. 28–30 (Calcaire grossier, Parnes, Paris Basin, France, fossil).

parva C. B. Adams **Geomelania gracilis** var.: 1850, C to C no. 6, p. 95 (Jamaica); *non parva* Chitty.

parva Chitty **Geomelania:** 1853, C to C, Kingston, Jamaica no. 1 [13], p. 6 (Peace River, Manchester, Jamaica); *non parva* C. B. Adams 1850. Lectotype MCZ 177211.

parvula Quadras and v. Möllendorff **T. (Taheitia):** 1894, Nach. Malak. Ges. **26,** p. 41 (Mariana Islands).

parvulina Clench and Turner **Geomelania (Merrilliana):** 1948. New name for *G. parva* Chitty 1853; *non parva* C. B. Adams 1850. This paper, p. 180.

pauperata C. B. Adams **Geomelania:** 1850, C to C no. 6, p. 97 (Jamaica).

peilei Dean **Geomelania:** 1933, Journal of Conchology **19,** p. 333, fig. 7–9 (Montpelier, St. James, Jamaica). Holotype in the National Museum of Wales, paratype MCZ no. 160811.

The earlier portion of this paper was printed (p. 175) before we had received a paratype specimen of this species from Dr. C. Matheson of the National Museum of Wales. In our opinion, *G. peilei* Dean is a synonym of *G. jamaicensis* Pfeiffer. It is only a very little smaller than the lectotype specimen of *G. fortis* C. B. Adams another synonym of *G. jamaicensis* Pfeiffer. The axial costae of both *peilei* and *fortis* are exactly the same and do not differ as stated by Dean.

pellucida Dohrn **T.:** 1860, Malak. Blatt. **6,** p. 203 (Arabia). Paratypes MCZ 104560.

pfeifferi v. Martens **T.:** 1861, Malak. Blatt. **7,** p. 43 (Japan). Holotype Rijksmuseum, Leiden, Holland; Paratype MCZ 160359.

piratica Clench and Turner **T. scalaris** subsp.: 1948, *Johnsonia* **2,** p. 161, pl. 72, fig. 1–4 (St. George's Causeway, Bermuda). Holotype MCZ 178985.

porrecta Gould **T.:** 1847 [1848], Proc. Boston Soc. Nat. Hist. **2,** p. 208; Gould 1852, United States Exploring Expedition **12,** p. 110, pl. 8, fig. 127a–c (Taheiti, Society Islands). Lectotype MCZ 178662; Paratypes MCZ 178663 and the USNM.

princeps Dohrn **T.:** 1866, Malak. Blatt. **13,** p. 134 (Ilha do Principe [Princes Island, Gulf of Guinea, Africa]); Pfeiffer 1867, Novitates Conchologicae **3,** p. 317, pl. 76, fig. 10–11. Lectotype MCZ 175593. Is *T. rostrata* Gould; Clench and Turner 1948, *Johnsonia,* p. 163.

procera C. B. Adams **Geomelania:** 1850, C to C no. 6, p. 95 (Jamaica). Lectotype MCZ 177201.

pulchella Pfeiffer **T.:** 1839, Archiv f. Nat. von Weigmann (5th year) **1,** p. 356 (Cuba); Küster 1855, Conchylien-Cabinet (2) **1,** pt. 23, p. 10, pl. 2, fig. 11–15; for figure of the radula, see this paper, pl. 22, fig. 2. Lectotype, Museo Poey 181; Paratype MCZ 158170.

pumila H. B. Baker **Geomelania (Scalatella) striosa** subsp.: 1935, Nautilus **48,** p. 83, pl. 3, fig. 6 (Eastern end of John Crow Mts., near Portland-St. Thomas boundary, Jamaica). Holotype ANSP 163727.

punctata Monterosato **T.:** 1878, Enumerazione e Sinonimia delle conchiglie mediterranee, Palermo, p. 27 (Algerie [Algeria]).

We have not seen this paper.

punica Issel **Albertisia:** 1880, Ann. del Museo Civico di Storia Nat. di Genova **15,** p. 275 (Megerdah near Utica [Utique] Tunis).

Is in the genus *Truncatella.*

pygmaea C. B. Adams **Cylindrella** (?): 1845, Proc. Boston Soc. Nat. Hist. **2,** p. 14 (Jamaica); *non Geomelania pygmaea* C. B. Adams 1850. Is a *Geomelania.* Lectotype MCZ 156155.

pygmaea C. B. Adams **Geomelania typica:** 1850, C to C no. 6, p. 96 (Jamaica); *non pygmaea* C. B. Adams 1845.

pyramidata C. B. Adams **Geomelania:** 1851, C to C no. 9, p. 159 (Jamaica).

quadrasi v. Möllendorff **T.:** 1893, Bericht der Senckenbergischen Naturforschenden Gesellschaft in Frankfurt, p. 137, pl. 5, fig. 10a–b (Magallanes, Sibuyan, Philippines).

quoyi Pfeiffer **T.:** 1846, Zeit. f. Malak. **3,** p. 187 (Vanikoro Id.).

This is an absolute synonym of *Cyclostoma striata* Quoy and Gaimard. Pfeiffer substituted a new name but gave no reason for this change.

reclusa Guppy **Blandiella:** 1871, American Journal of Conchology **6,** p. 309, pl. 17, fig. 7–8 (Oropuche Mts., Trinidad). Lectotype MCZ 175606. This paper, p. 183.

rostrata Gould **T.** 1847 [1848], Proc. Boston Soc. Nat. Hist. **2,** p. 209 (Rio Janeiro [Brazil]); Gould, 1852, United States Exploring Expedition **12,** p. 111, pl. 8, fig. 128a–b; Clench and Turner 1948, *Johnsonia,* p. 162. Lectotype New York State Museum G2541a.

rubra 'Gassies' Paetel **T.:** 1889, Catalog der Conchylien-Sammlung **2,** p. 433 (Noumea [New Caledonia]); nude name.

rustica Mousson **T.:** 1865, J de C **13,** p. 186, pl. 14, fig. 8 (Nucuiona, Uvea [Wallis Id.]). Lectotype MCZ 178651. This paper, p. 164.

samoensis 'Reeve' Paetel **T.:** 1889, Catalog der Conchylien-Sammlung **2,** p. 433.

No such species exists. Paetel referred to the Journal de Conchyliologie 1865, **13,** p. 186. On this page there is a description of *Melania samoensis* Reeve.

scalariformis C. B. Adams **T.:** 1845, Proc. Boston Soc. Nat. Hist. **2,** p. 12 (Jamaica). Is *T. scalaris* Michaud; Clench and Turner 1948, *Johnsonia,* p. 160; *non scalariformis* Reeve.

scalariformis Reeve **T.:** 1842, Conchologia Systematica **2,** p. 94, pl. 182, fig. 6 (locality not given); Reeve 1842 [1843], PZS **10,** p. 197 (Annaa [Toumoto Islands]); *non scalariformis* C. B. Adams.

scalarina Cox **T.:** 1867, PZS p. 40 (Port Lincoln, Australia); Cox 1868, Monograph of Australian Land Shells, Sydney, Australia, p. 93, pl. 15, fig. 10a–b. Cotypes MCZ 159354.

scalaris Michaud **Rissoa:** 1830, Descr. Genre Rissoa, p. 18 [we have not seen this paper]; Michaud, 1832, Descriptions de Plusieurs Nouvelles especès de Coquilles du Genre Rissoa (Fréminville) 2nd edition, p. 21, fig. 31–32 (locality unknown). Neoholotype MCZ 165706 (Port Antonio, Jamaica).

scalaroides v. Martens **T.:** 1864, Monatsberichte der Königlichen Preufs. Akad. der Wissen. zu Berlin for 1864, p. 119 (Amboina).

Scalatella von Martens: 1860, Die Heliceen, Leipzig p. 41; genotype, *Cylindrella greyana* C. B. Adams, monotypic. This paper, p. 178.

schneideri Rensch **T.:** 1937, Archiv f. Natur. N.F. **6,** pt. 4, p. 628, fig. 51–52 (Neu Pommern Id., Bismarck Archipelago). Is a *Taheitia.*

semicostata Montrouzier **T.:** 1862, J de C **10,** p. 243, pl. 9, fig. 10 (Island of Art and New Caledonia). Is *T. marginata* Pfeiffer. This paper, p. 163. Cotypes MCZ 178620; 178632.

semicostulata Jickeli **T.:** 1874, Nova Acta der Ksl. Leop.-Carol. Deutschen Akademie der Naturforscher **37,** p. 189, pl. 7, fig. 8 (Dahlak [Daalac, Eritrea] Red Sea). Is *pellucida* Dohrn. This paper, p. 164.

semperi Kobelt **T.:** 1884, Nach. d. Deutschen Malak. Ges. **16,** p. 52 (Pangongon, Bohol?, Philippine Islands). Is *T. guerinii* Villa. This paper, p. 167.

sinuosa Chitty **Geomelania:** 1853, C to C, Kingston, Jamaica no. 1 [13], p. 5 (Ashley Hall, Trelawny, Jamaica). Lectotype MCZ 165718.

solida Menke **T.:** 1830, Synopsis Methodica Molluscorum, Pyrmont, pp. 43, 137 (locality unknown).

soluta Clench and Turner **Taheitia:** 1948 (Bavatu, Vanua Mbalavu Id., Lau Group, Fiji Islands). Holotype B. P. Bishop Museum 179895; Paratypes MCZ 157754. This paper, p. 190.

spectabilis Held **T.:** 1848, Wassermoll Bayerns, Jahresh. Landwirth Gewerbe Schule Muenchen, p. 22. We have not seen this paper. Is *Acicula spectabilis* Rossmasseler; Pfeiffer 1852, p. 6.

stimpsonii Stearns **T.:** 1872, Proc. California Acad. Science **4,** p. 249, pl. 1, fig. 5 (False Bay near San Diego, California).

striata Quoy and Gaimard **Cyclostoma:** 1832, Voyage l'Astrolabe Zoologie **2,** p. 186, pl. 12, fig. 27–30 (Vanikoro Id. [Santa Cruz Ids.]).

This is possibly a species of *Truncatella*, but it is impossible to determine from the figure just what species it could be. According to the authors, the original specimens were lost after the figures had been drawn.

striata 'J. de C. Sowerby' Reeve **T.:** 1842, Conchologia Systematica **2,** p. 94, pl. 82, fig. 4 (no locality given). Is probably in the genus *Coxiella*.

striatula Menke **T.:** 1843, Molluscorum Novae Hollandiae, p. 9 (west coast Australia).

Is not in the genus *Truncatella*, but is a *Coxiella*, in the family Bulimidae.

strigilata 'Parreyss' Philippi **Paludina:** 1844, Enumeratio Molluscorum Siciliae **2,** p. 133. Is *T. truncatula* Draparnaud; Jeffreys 1867, p. 87.

striosa C. B. Adams **Geomelania:** 1850, C to C no. 6, p. 96 (Jamaica). Holotype, British Museum.

subauriculata Quadras and v. Möllendorff **T.:** 1894, Nach. Malak. Ges. **26,** p. 40 (Mariana Islands). Cotypes USNM 302936; 201189; MCZ 21472. Is a *Taheitia.* This paper, p. 192.

subcylindrica Linné **Helix;** 1767, Systema Naturae 12 ed. **1,** p. 1248 (northern Europe). This is often quoted in error as **subcylindrica** Gray.

sublaevigata 'Potiez and Michaud' Paetel **T.:** Catalog der Conchylien-Sammlung **2,** p. 433; nude name. Is *T. truncatula* Draparnaud, according to Paetel.

subsulcata Gassies **T.:** 1878, J de C **26,** p. 338 (Lifu Id., Loyalty Islands).

subtruncatus Montagu **Turbo:** 1803, Testacea Britannica, p. 300, pl. 10, fig. 1 (Southampton, England). Is *T. subcylindrica* Linné.

succinea C. B. Adams **T.:** 1845, Proc. Boston Soc. Nat. Hist. **2,** p. 12, (Jamaica). Lectotype MCZ 177154.

Taheitia Pease: 1867, American Journal of Conchology **3,** p. 229; [error for *Taheitia* H. and A. Adams].

Taheitia H. and A. Adams: 1863, Annals and Magazine of Natural History (3) **11,** p. 19; genotype, *Truncatella porrecta* Gould, monotypic. This paper, p. 183.

Tahetia Tapparone Canefri: 1886, Ann. Museo Civico Storia Nat. Genova **24,** p. 198; [error for *Taheitia* H. and A. Adams].

Tahitia H. Adams and G. F. Angas: 1865, PZS, pl. 2, fig. 2; [error for *Taheitia* H. and A. Adams, on plate caption only].

tasmanica: Tenison Woods **T.:** 1875 [1876], Proc. Royal Soc. Tasmania, p. 143 (Bass Straits, Tasmania). Is *T. scalarina* Cox; E. L. May, 1921, p. 57.

tatarica Schrenck **T.:** 1861, Bull. de l'Academie Imperiale des Sciences de Saint-Petersburg **4,** p. 409 (Bay of Castries, Manchuria [de Kastri, Gulf of Tatary, Siberia]); Schrenck 1867, Mollusken des Amur-Landes und des Norjapanischen Meeres **2,** pt. 3, p. 310, pl. 14, fig. 10–13.

We consider this to be *Cecina manchurica* A. Adams.

terebralis Menke **T.:** 1830, Synopsis Methodica Molluscorum, Pyrmont, p. 44 (no locality given).

teres Pfeiffer **T.:** 1856 [1857], PZS **24,** p. 336, (Isle of Mauritius and Trinity Bay, Australia).

tesselata 'Boettger' Quadras and v. Möllendorff **Taheitia:** 1897, Nach. Malak. Ges. **29,** p. 32 (Bismarck Archipelago). Cotypes MCZ 179585.

thaanumi Clench and Turner **T.:** 1948 (Ulali Id., Truk Group, Caroline Islands). Holotype MCZ 159379. This paper, p. 165.

theresa Risso **Fidelis:** 1826, Histoire Naturelle l'Europe Méridionale **4,** p. 121, pl. 5, fig. 59 (Central Europe). Is *T. truncatula* Draparnaud; Jeffreys 1867, p. 87.

Tomlinella Clench and Turner: 1948, *Johnsonia* **2,** p. 159; subgenotype, *Truncatella scalaris* Michaud; *non Tomlinella* Viader 1938.

Tomlinitella Clench and Turner: 1948, subgenotype, *Truncatella scalaris* Michaud. New name for *Tomlinella* Clench and Turner, *non Tomlinella* Viader 1938. This paper, p. 169.

tongana Clench and Turner **Taheitia:** 1948 (one-half mile inland from Vaigana, Eua Island, Tonga Islands). Holotype B. P. Bishop Museum 87703; Paratypes MCZ 157757. This paper, p. 190.

truncata Hartmann **Acmea:** 1857, Neue Alpina **1,** p. 212. Is a synonym of *T. truncatula* Draparnaud; Pfeiffer 1857, p. 137.

truncata 'Draparnaud' Herrmannsen **Cyclostoma:** 1849, Indicis Generum Malacozoorum **2,** p. 626; [error for *Cyclostoma truncatula* Draparnaud].

Truncatella Risso: 1826, Histoire Naturelle l'Europe Méridionale **4,** p. 124; genotype, *Truncatella laevigata* Risso, subsequent designation, Gude 1921; equals *Helix subcylindrica* Linné.

Truncatella Lowe: 1832, Zoological Journal **5,** p. 300; genotype, *Cyclostoma truncatulum* Draparnaud, monotypic.

Is a synonym and homonym of *Truncatella* Risso.

truncatulina 'Lowe' Sowerby **T.:** 1842, A Conchological Manual, London, p. 280; [error for *T. truncatula* Draparnaud].

Truncatula Leach: 1847, Annals and Magazine of Natural History (1) **20,** p. 271; genotype, *Truncatula truncata* Montagu = *Turbo truncatus* Montagu = *Helix subcylindrica* Linné; subsequent designation, Clench and Turner, 1948, *Johnsonia,* p. 152.

Truncatula 'Risso' Caziot: 1910, Etude Moll. Princip. Monaco, p. 450; [error for *Truncatella* Risso]; Neave 1940, Nomenclator Zoologicus **4,** p. 583; *non* Leach 1847, *non* Hagenow 1851.

truncatulum Draparnaud **Cyclostoma:** 1805, Histoire Naturelle des Mollusques Terrestres et Fluviatiles de la France, p. 40, pl. 1, fig. 28–31 (coast of Mediterranean).

truncatus Montagu **Turbo:** 1803, Testacea Britannica, p. 300, pl. 10, fig. 7 (Southampton and Plymouth, England). Is *T. subcylindrica* Linné.

turricula Mousson **T.:** 1869, [in] Museum Godeffroy, Hamburg, Catalog 4, p. 76 (Mango Id., Lau Group, Fiji Islands); nude name; Mousson 1870, J de C **18,** p. 196. This paper, p. 188.

turrita 'Küster' Coen **T.:** 1933, R. Comitato Talassografico Italiano, Venice Memoria 192, p. 159 (Adriatic); nude name.

turrita 'Pfeiffer' Dall **T.:** 1885, Bull. United States Geological Survey, no. 24, p. 314; [error for "Testa" not *Truncatella*].

typica C. B. Adams **Geomelania:** 1850, C to C no. 6, p. 95 (Jamaica). Lectotype MCZ 177208.

ultima Rensch **T.:** 1937, Archiv f. Natur. N. F. **6,** pt. 4, p. 629, fig. 53 (Neu Pommern Id., Bismarck Archipelago). Is a *Taheitia.*

valida Pfeiffer **T.:** 1846, Zeit. f. Malak. **3,** p. 182 (Philippine Islands). Cotypes MCZ 178649. Is *T. guerinii* Villa. This paper, p. 167.

variabilis Pfeiffer **T.:** 1846, Zeit. f. Malak. **3,** p. 183; nude name included in the synonymy of *T. caribaeensis* Reeve.

ventricosa 'Sowerby' Reeve **T.:** 1842, Conchologia Systematica **2,** p. 94, pl. 182, fig. 2 (locality not given). Is in the genus *Tomichia;* Thiele 1929, p. 150.

vicina C. B. Adams **Geomelania:** 1850, C to C no. 6, p. 96 (Jamaica). Lectotype MCZ 156153.

vitiacea 'Gould' Mousson **T.:** 1865, J de C **13,** p. 185; [error for *T. vitiana* Gould].

vitiana Gould **T.:** 1847 [1848], Proc. Boston Soc. Nat. Hist. **2,** p. 208 (Fiji Islands); Gould 1852, United States Exploring Expedition **12,** p. 109, pl. 8, fig. 126a–b. Is *T. guerinii* Villa. This paper, p. 167. Cotypes MCZ 178664.

wallacei H. Adams **T. (Taheitia):** 1865, PZS p. 416, pl. 21, fig. 13–14 (Waigiou, New Guinea).

wrighti Pfeiffer **T.:** 1862, Malak. Blatt. **9,** p. 127 (Yateras, Guantánamo, Cuba).

yorkensis Cox **T.:** 1868, Monograph of Australian Land Shells, Sydney, p. 93, pl. 15, fig. 11 (Cape York [Queensland] Australia). Is *T. guerinii* Villa. This paper, p. 167. Cotypes MCZ 159349.

Zeanoe Leach 1852, Synopsis of the Mollusca of Great Britain, London, p. 198; genotype, *Turbo nitida* Adams, monotypic. Is *Truncatella* Risso; Jeffreys 1867, p. 84.

Bibliography

Adams, C. B., 1849–1852, Contributions to Conchology, New York, pt. 1–12, pp. 1–258.

Beau, ——, 1857 [1858], Catalogue des Coquilles Recueillies a la Guadeloupe et ses Dépendances. Revue Coloniale, pp. 1–27.

Binney, W. G., 1859, Terrestrial Air-Breathing Mollusks of the United States **4,** p. 29.

Chitty, E., 1853, Contributions to Conchology (a continuation), Kingston, Jamaica, pt. 1 [13], pp. 1–19.

Clench, W. J. and R. D. Turner, 1948, Johnsonia **2,** no. 25, pp. 149–164.

Dall, W. H., 1885, Bulletin United States Geological Survey no. 24, pp. 311–314.

Dean, J. D., 1933, Journal of Conchology **19,** no. 10, pp. 331–333.

Garrett, Andrew, 1887, Proceedings of the Zoological Society of London, pp. 299–302.

Germain, L., 1931, Fauna de France No. 22, Mollusques Terrestres et Fluviatiles, pp. 664–667.

Gude, G. K., 1921, The Fauna of British India including Ceylon and Burma, Mollusca **3,** p. 360.

Jeffreys, J. G., 1867, British Conchology, London **4,** pp. 43, 69, 83–87.

Jeffreys, J. G., 1884, Proceedings of the Zoological Society of London, p. 354.

Küster, H. C., 1855, Conchylien-Cabinet **1,** Abthlg. 23, pp. 1–16, pl. 1–2

May, W. L., 1921, A Check-list of the Mollusca of Tasmania, Hobart, pp. 1–14.

Menke, C. T., 1830, Synopsis Methodica Molluscorum, Pyrmont, p. 43.

Nevill, G., 1878, Hand List of Mollusca in the Indian Museum, Calcutta, pp. 250–254.

Paetel, F., 1889, Catalog der Conchylien-Sammlung, Berlin **2,** pp. 431–434.

Pfeiffer, L., 1852, Monographia Pneumonopomorum Viventium **1,** p. 5.

Pfeiffer, L., 1856, Monographia Auriculaceorum Viventium **1,** pp. 175–199.

Pfeiffer, L., 1857, Catalogue of Auriculidae, Proserpinidae and Truncatellidae in the Collection of the British Museum, pp. 129–143.

Pfeiffer, L., 1865, Monographia Auriculaceorum Viventium **3,** pp. 3–8.

Pilsbry, H. A., 1926, Nautilus **40,** pp. 32–33.

Pilsbry, H. A., 1948, Land Mollusca of North America. Monographs no. 3, Academy of Natural Sciences, Philadelphia **2,** pt. 2, pp. 1065–1074.

Reeve, L., 1842, Conchologia Systematica, London **2,** pp. 93–94, pl. 182.

Rensch, I., 1937, Archiv für Naturgeschichte, N. F. **6,** Heft 4, pp. 626–631.

Sykes, E. R., 1905, Proceedings of the Malacological Society of London **6,** pp. 225–226.

Sykes, E. R., 1925, Proceedings of the Malacological Society of London **16,** pp. 179–180, pl. 8.

Thiele, J., 1929, Handbuch der Systematischen Weichtierkunde, Jena **1,** pp. 151–152.

Vendryes, Henry, 1899, Journal of the Institute of Jamaica **2,** pt. 6, pp. 590–607.

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Paetel's Catalogue

PAETEL FRIEDRICH, 1887–1891: *Catalog der Conchylien-Sammlung,* Berlin. This molluscan catalogue of Friedrich Paetel was issued in parts and it appeared between the years 1887 and 1891.

Volume	I	Lief.	1–8	Pages	1–639+16	Issued	1887–1888
"	II	"	9–14	"	1–505+12	"	1888–1890
"	III	"	15–18	"	1–256+23	"	1890–1891

This is not only a list of the species contained in Paetel's collection, but includes also the names of all species that he gleaned from the literature. The number of nude names occurring in this list indicates that Paetel probably had access to museum collections throughout Germany. As a consequence, many manuscript names which he copied from museum labels were included. References are not always given nor are they always to the original citation. It is, however, the most complete list of specific names ever published and it is very important as a source of information, much of which could not be located without considerable effort.

Paetel's earlier catalogues, published in 1869, 1873 and 1883, were much smaller and, of course, completely superceded by his three volume work.